

LAMPIRAN

LAMPIRAN

Tabel 1
Data penjualan untuk Produk A

Bulan	1997	1998	1999	2000	2001
Januari	850	870	910	935	958
Februari	880	873	915	940	962
Maret	865	877	918	948	970
April	840	875	905	938	965
Mei	847	880	910	945	975
Juni	855	888	918	950	980
Juli	857	900	920	957	978
Agustus	845	890	915	945	970
September	860	895	925	950	980
Oktober	868	898	930	953	985
November	875	905	933	960	992
Desember	865	902	927	950	980

Tabel 2
Data penjualan untuk Produk B

Bulan	1997	1998	1999	2000	2001
Januari	922	940	940	955	957
Februari	920	950	950	958	960
Maret	925	955	955	963	950
April	935	952	952	957	944
Mei	942	970	970	965	955
Juni	920	955	955	950	940
Juli	930	958	958	958	954
Agustus	945	962	962	966	945
September	951	955	955	970	950
Oktober	960	952	952	967	960
November	950	960	960	975	975
Desember	930	948	948	955	940

Tabel 3
Data penjualan untuk Produk C

Bulan	1997	1998	1999	2000	2001
Januari	1000	990	995	985	1005
Februari	980	997	985	980	1010
Maret	990	1000	985	1000	990
April	1000	985	990	1015	1005
Mei	1005	985	985	1010	995
Juni	995	1000	1000	1005	1000
Juli	990	980	985	1000	995
Agustus	1000	990	990	990	990
September	985	1000	1000	985	1000
Oktober	980	985	1010	995	1010
November	980	985	1005	1000	1015
Desember	985	1000	995	990	1000

Tabel 4
Data penjualan untuk Produk D

Bulan	1997	1998	1999	2000	2001
Januari	1200	1198	1182	1230	1250
Februari	1195	1210	1206	1234	1228
Maret	1203	1200	1215	1240	1235
April	1220	1197	1220	1215	1232
Mei	1205	1182	1228	1220	1240
Juni	1200	1197	1210	1230	1255
Juli	1210	1200	1215	1225	1240
Agustus	1217	1185	1225	1235	1245
September	1230	1193	1229	1222	1250
Oktober	1200	1200	1232	1230	1260
November	1210	1203	1220	1232	1255
Desember	1205	1208	1225	1240	1230

Tabel 5
Data penjualan untuk Produk E

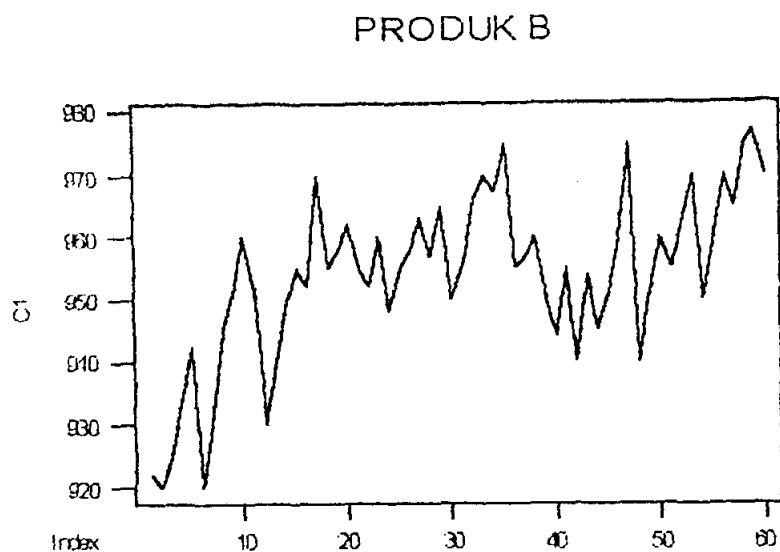
Bulan	1997	1998	1999	2000	2001
Januari	1000	1020	1040	1034	1050
Februari	1010	1029	1035	1040	1032
Maret	1016	1022	1038	1042	1030
April	1012	1030	1032	1020	1037
Mei	1020	1040	1035	1028	1041
Juni	1015	1045	1020	1033	1045
Juli	1025	1038	1026	1037	1042
Agustus	1033	1020	1022	1031	1050
September	1030	1027	1025	1040	1047
Oktober	1010	1035	1030	1043	1051
November	1018	1045	1032	1047	1055
Desember	1025	1050	1028	1045	1032

LAMPIRAN II

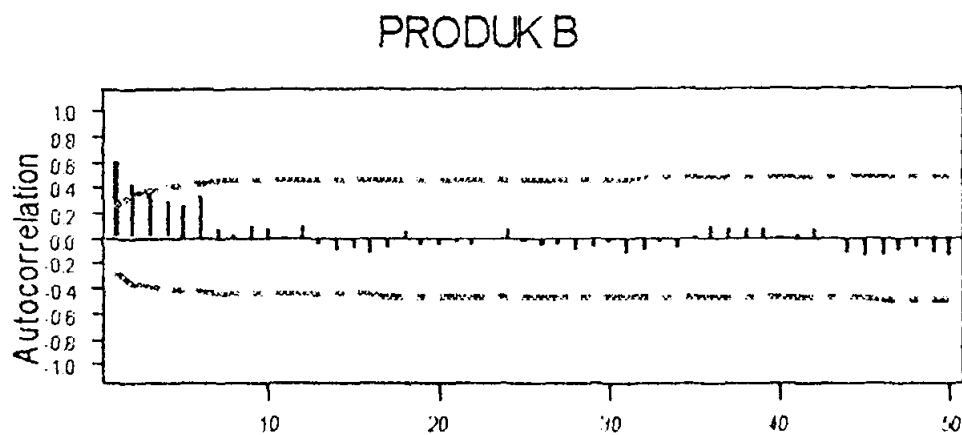
HASIL PERAMALAN

PRODUK B

Plot data awal

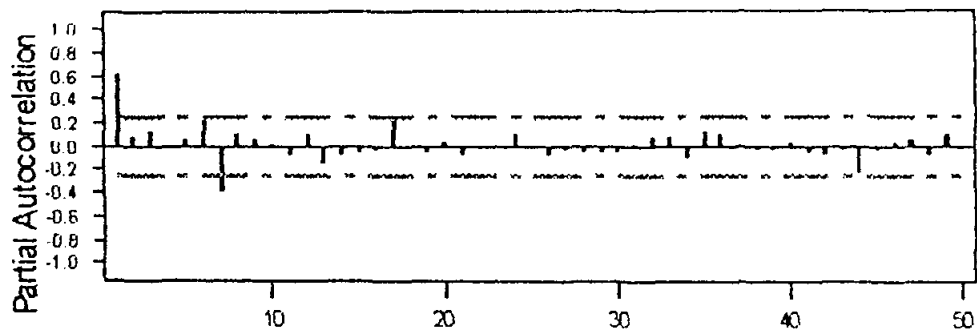


PLOT ACF DAN PACF



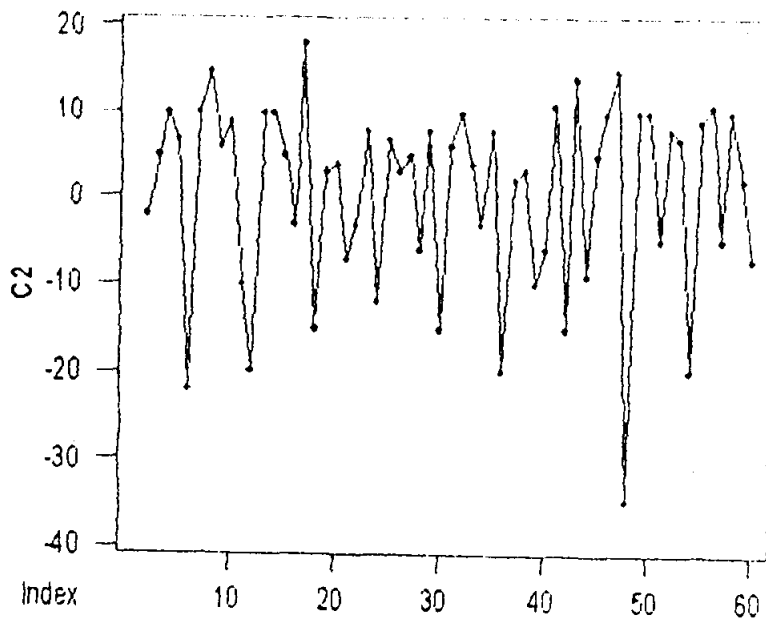
Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	0.62	478	23.99	13	-0.06	-0.27	66.51	25	-0.04	-0.16	71.90	37	0.00	0.36	92.66	49	-0.13	-0.53	113.47
2	0.43	2.53	36.08	14	0.10	-0.43	87.28	26	-0.06	-0.24	72.30	38	0.09	0.39	84.08	50	-0.16	-0.66	123.20
3	0.38	2.00	46.41	15	-0.08	-0.37	87.87	27	-0.05	-0.21	72.56	39	0.08	0.34	85.21				
4	0.29	1.43	50.93	16	-0.14	-0.60	69.41	28	-0.10	-0.43	73.69	40	0.01	0.02	85.21				
5	0.26	1.23	55.34	17	-0.07	-0.31	89.85	29	-0.09	-0.39	74.68	41	0.03	0.14	85.42				
6	0.34	1.61	63.40	18	0.05	0.23	70.10	30	-0.04	-0.16	74.84	42	0.00	0.32	86.62				
7	0.00	0.37	63.87	19	-0.06	-0.28	70.47	31	-0.14	-0.59	77.25	43	-0.01	-0.04	86.64				
8	0.05	0.21	84.02	20	-0.06	-0.20	70.68	32	-0.10	-0.43	78.60	44	0.13	-0.55	90.62				
9	0.10	0.45	84.75	21	-0.04	-0.17	70.82	33	-0.04	-0.16	78.79	45	-0.14	-0.60	95.73				
10	0.08	0.34	85.19	22	-0.07	-0.29	71.25	34	-0.07	-0.32	79.59	46	-0.16	-0.66	102.46				
11	0.02	0.10	85.23	23	-0.02	-0.09	71.29	35	0.00	0.01	79.59	47	-0.10	-0.41	105.30				
12	0.11	0.51	86.22	24	0.07	0.31	71.02	36	0.11	0.48	81.55	48	-0.09	-0.38	107.92				

PRODUK B

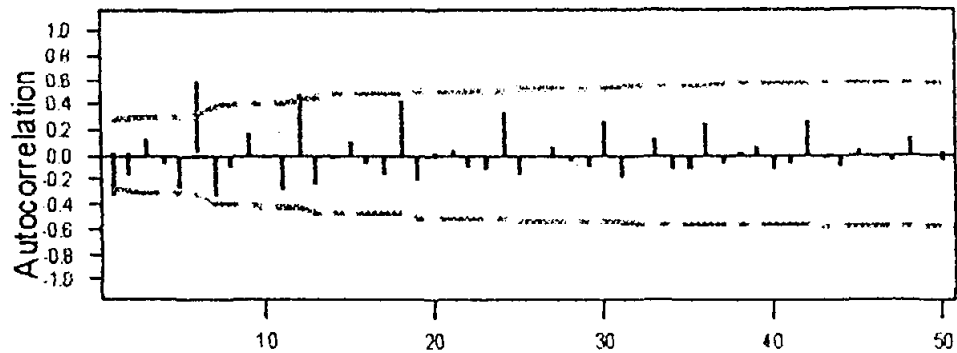


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	0.62	4.78	13	-0.15	-1.15	25	-0.02	-0.16	37	0.01	0.10	49	0.10	0.75
2	0.09	0.67	14	-0.07	-0.57	26	-0.09	-0.66	38	-0.04	-0.33	50	0.02	0.14
3	0.13	1.01	15	-0.07	-0.51	27	-0.04	-0.32	39	-0.04	-0.33			
4	-0.01	-0.09	16	-0.04	-0.32	28	-0.05	-0.40	40	0.03	0.20			
5	0.06	0.49	17	0.24	1.83	29	-0.06	-0.45	41	-0.07	-0.52			
6	0.21	1.66	18	-0.02	-0.13	30	-0.05	-0.37	42	-0.08	-0.64			
7	-0.40	-3.08	19	-0.05	-0.40	31	0.02	0.18	43	-0.04	-0.30			
8	0.11	0.87	20	0.04	0.32	32	0.08	0.65	44	-0.24	-1.89			
9	0.07	0.51	21	-0.08	-0.65	33	0.08	0.66	45	-0.03	-0.26			
10	0.01	0.07	22	-0.00	-0.03	34	-0.10	-0.74	46	0.03	0.25			
11	-0.09	-0.66	23	-0.00	-0.01	35	0.13	1.02	47	0.05	0.37			
12	0.11	0.87	24	0.10	0.78	36	0.11	0.84	48	-0.07	-0.57			

Transform :difference (1) PRODUK B

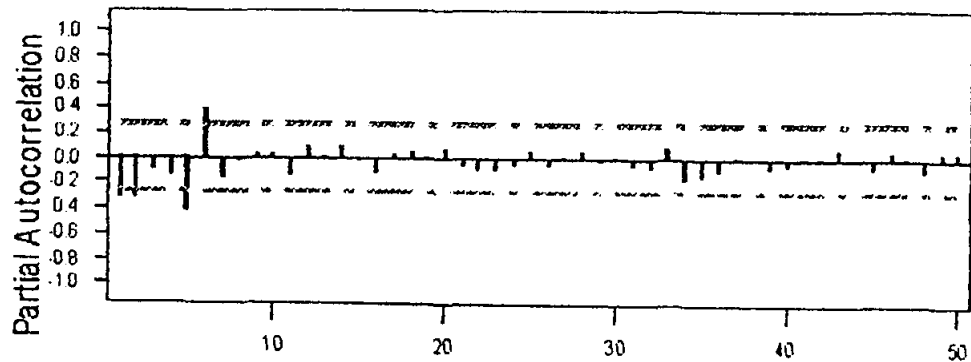


PRODUK B diff (1)



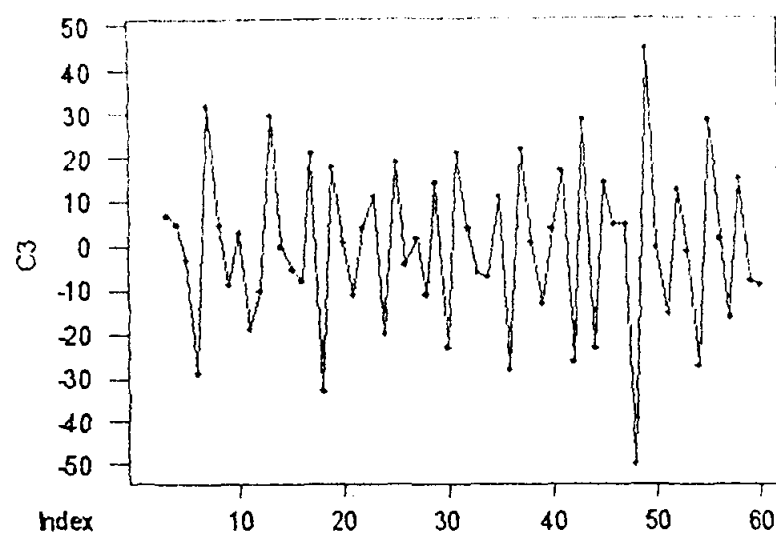
Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	0.34	2.62	7.21	13	0.25	-1.09	78.50	25	-0.17	0.66	120.48	37	-0.08	-0.28	154.45	49	-0.01	0.03	185.28
2	-0.18	-1.21	9.15	14	0.02	-0.10	78.54	26	-0.00	-0.01	120.48	38	0.00	0.01	154.45	50	0.05	-0.17	186.23
3	0.12	0.79	10.02	15	0.11	0.46	79.47	27	0.05	0.19	120.76	39	0.08	0.21	155.08				
4	-0.07	-0.48	10.36	16	-0.09	-0.36	80.08	28	-0.05	-0.18	121.03	40	-0.13	-0.46	156.24				
5	0.26	1.74	14.94	17	-0.18	0.77	82.88	29	0.11	0.43	122.61	41	-0.09	-0.32	158.85				
6	0.60	3.79	39.27	18	0.42	1.76	98.27	30	0.27	1.02	131.79	42	0.27	0.94	174.02				
7	-0.33	-1.72	48.04	19	-0.23	-0.90	102.07	31	-0.20	-0.75	137.02	43	-0.03	-0.09	174.80				
8	-0.10	-0.49	47.52	20	0.01	0.04	102.88	32	-0.01	-0.03	137.03	44	-0.11	-0.38	177.79				
9	0.18	0.88	49.82	21	0.02	0.09	102.93	33	0.13	0.47	139.29	45	0.04	0.13	178.16				
10	-0.01	-0.05	49.82	22	-0.10	-0.40	103.94	34	-0.13	-0.48	141.79	46	-0.04	-0.14	178.58				
11	-0.29	-1.43	56.33	23	-0.12	-0.47	105.37	35	-0.14	-0.49	144.56	47	-0.06	-0.20	179.53				
12	0.48	2.24	73.61	24	0.34	1.33	117.30	36	0.24	0.86	153.47	48	0.13	0.46	185.25				

PRODUK B diff(1)

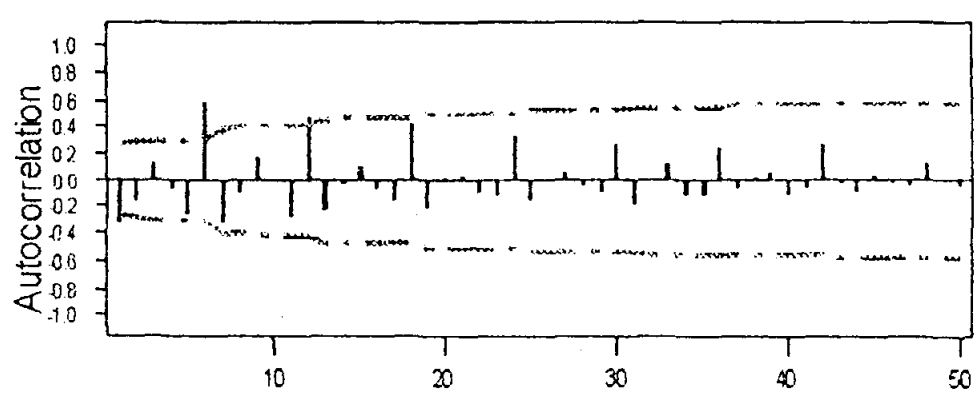


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.34	-2.62	13	0.01	0.06	25	0.06	0.45	37	0.01	0.06	49	0.06	0.45
2	-0.33	-2.53	14	0.11	0.84	26	0.08	-0.44	38	0.01	0.04	50	0.05	0.36
3	-0.10	-0.74	15	-0.03	-0.24	27	0.00	0.03	39	0.07	0.57			
4	0.15	1.12	16	-0.14	-1.05	28	0.06	0.45	40	0.05	0.42			
5	-0.43	-3.29	17	0.04	0.34	29	-0.04	-0.28	41	0.00	-0.01			
6	0.40	3.05	18	0.05	0.38	30	0.02	0.14	42	0.01	0.11			
7	-0.17	-1.27	19	0.01	0.06	31	-0.06	-0.42	43	0.09	0.69			
8	-0.03	-0.25	20	0.08	0.63	32	0.07	0.54	44	0.00	0.04			
9	0.03	0.25	21	-0.05	-0.48	33	0.11	0.85	45	-0.07	-0.54			
10	0.05	0.35	22	-0.12	-0.89	34	0.18	1.35	46	0.07	0.50			
11	-0.14	-1.08	23	-0.10	-0.73	35	-0.15	-1.12	47	0.01	0.06			
12	0.10	0.80	24	-0.07	-0.51	36	-0.10	-0.79	48	-0.10	-0.75			

TRANSFORM : difference (2) PRODUK B

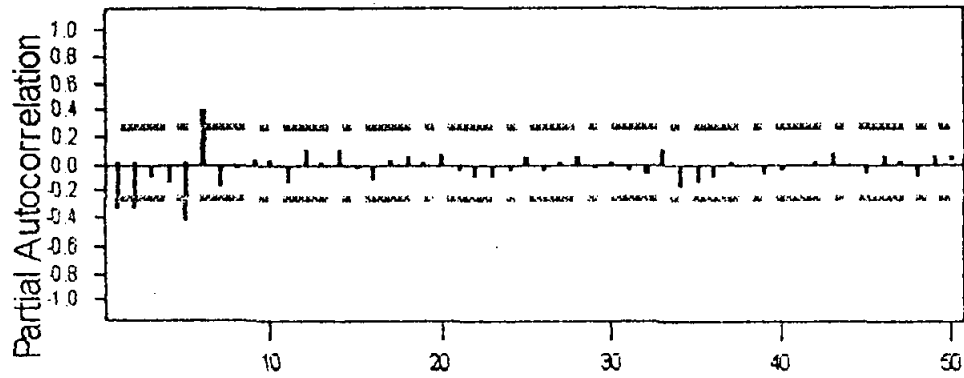


PRODUK B diff(1,6)



Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	-0.34	-2.62	7.21	13	-0.25	-1.09	78.50	25	-0.17	-0.66	120.48	37	-0.08	-0.28	154.45	49	-0.01	-0.03	186.28
2	-0.18	-1.21	9.15	14	-0.02	-0.10	78.54	26	-0.00	-0.01	120.48	38	0.00	0.01	154.45	50	-0.05	-0.17	186.23
3	0.12	0.79	10.02	15	0.11	0.46	79.47	27	0.05	0.19	120.76	39	0.06	0.21	155.08				
4	0.07	-0.48	10.36	16	-0.09	-0.36	80.08	28	-0.05	-0.18	121.03	40	0.13	0.46	156.24				
5	-0.26	-1.74	14.84	17	-0.18	-0.77	82.88	29	-0.11	-0.43	122.61	41	-0.09	-0.32	158.65				
6	0.60	3.79	39.27	18	0.42	1.76	98.27	30	0.27	1.02	131.79	42	0.27	0.94	174.82				
7	-0.33	-1.72	46.84	19	-0.23	-0.90	102.87	31	-0.20	-0.75	137.02	43	0.03	-0.09	174.98				
8	-0.10	-0.49	47.52	20	0.01	0.04	102.88	32	-0.01	-0.03	137.03	44	-0.11	-0.38	177.79				
9	0.18	0.88	49.82	21	0.02	0.09	102.93	33	0.13	0.47	139.29	45	0.04	0.13	178.16				
10	-0.01	-0.05	49.82	22	-0.10	-0.40	103.84	34	-0.13	-0.48	141.78	46	0.04	-0.14	178.58				
11	-0.29	-1.43	56.33	23	-0.12	-0.47	105.37	35	-0.14	-0.49	144.56	47	-0.08	-0.20	179.53				
12	0.48	2.24	73.61	24	0.34	1.33	117.30	36	0.24	0.86	153.47	48	0.13	0.46	185.25				

PRODUK B diff (1,6)



Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.34	-2.62	13	0.01	0.06	25	0.06	0.45	37	0.01	0.06	49	0.06	0.45
2	-0.33	-2.53	14	0.11	0.84	26	-0.06	-0.44	38	-0.01	-0.04	50	0.05	0.36
3	-0.10	-0.74	15	-0.03	-0.24	27	0.00	0.03	39	-0.07	-0.57			
4	-0.15	-1.12	16	-0.14	-1.05	28	0.06	0.45	40	-0.05	-0.42			
5	-0.43	-3.29	17	0.04	0.34	29	-0.04	-0.28	41	-0.00	-0.01			
6	0.40	3.05	18	0.05	0.38	30	0.02	0.14	42	0.01	0.11			
7	-0.17	-1.27	19	0.01	0.06	31	-0.06	-0.46	43	0.09	0.71			
8	-0.03	-0.25	20	0.08	0.63	32	-0.08	-0.58	44	-0.00	-0.04			
9	0.03	0.25	21	-0.06	-0.48	33	0.11	0.85	45	-0.07	-0.54			
10	0.05	0.35	22	-0.12	-0.88	34	-0.18	-1.35	46	0.07	0.50			
11	-0.14	-1.08	23	-0.10	-0.73	35	-0.15	-1.12	47	0.01	0.06			
12	0.10	0.80	24	-0.07	-0.51	36	-0.10	-0.79	48	-0.10	-0.75			

ARIMA MODEL (0,1,0)(0,1,1)⁶

ARIMA model for C1

Estimates at each iteration

Iteration	SSE	Parameters	
0	4279.36	0.100	0.326
1	3861.75	0.250	0.230
2	3533.51	0.400	0.147
3	3263.88	0.550	0.063
4	3017.03	0.700	-0.014
5	2762.36	0.850	-0.071
6	2756.85	0.953	-0.061
7	2690.50	0.922	0.015
8	2689.11	0.915	0.008
9	2689.08	0.916	0.002
10	2689.08	0.916	0.002

Unable to reduce sum of squares any further

Final Estimates of Parameters

Type	Coef	StDev	T
SMA 6	0.9157	0.0943	9.71
Constant	0.0018	0.1961	0.01

Differencing: 1 regular, 1 seasonal of order 6

Number of observations: Original series 60, after differencing 53

Residuals: SS = 2524.20 (backforecasts excluded)

MS = 49.49 DF = 51

Modified Box-Pierce (Ljung-Box) Chi-Square statistic

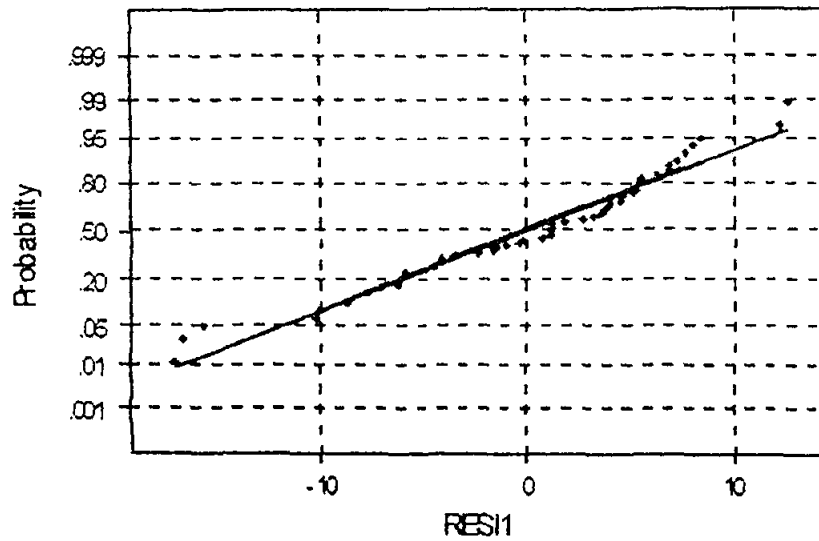
Lag	12	24	36	48
Chi-Square	6.8(DF=11)	15.3(DF=23)	30.2(DF=35)	44.0(DF=47)

Forecasts from period 60

95 Percent Limits

Period	Forecast	Lower	Upper	Actual
61	978.41	964.62	992.21	
62	984.69	965.18	1004.19	
63	983.83	959.94	1007.71	
64	987.54	959.95	1015.12	
65	994.99	964.15	1025.83	
66	976.41	942.63	1010.20	
67	984.83	947.88	1021.77	
68	991.10	951.25	1030.96	
69	990.24	947.67	1032.81	
70	993.96	948.84	1039.08	
71	1001.41	953.88	1048.95	
72	982.84	933.00	1032.67	

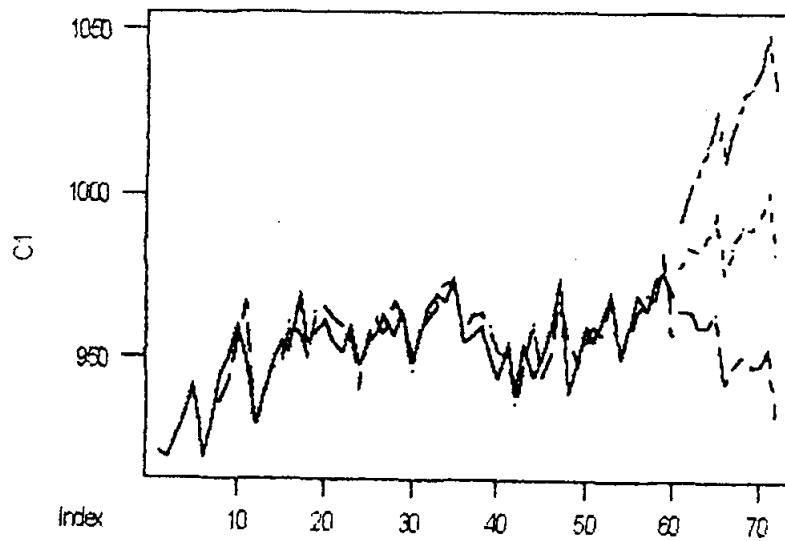
PRODUK B



Average: -0.212802
 StDev: 8.56382
 N: 53

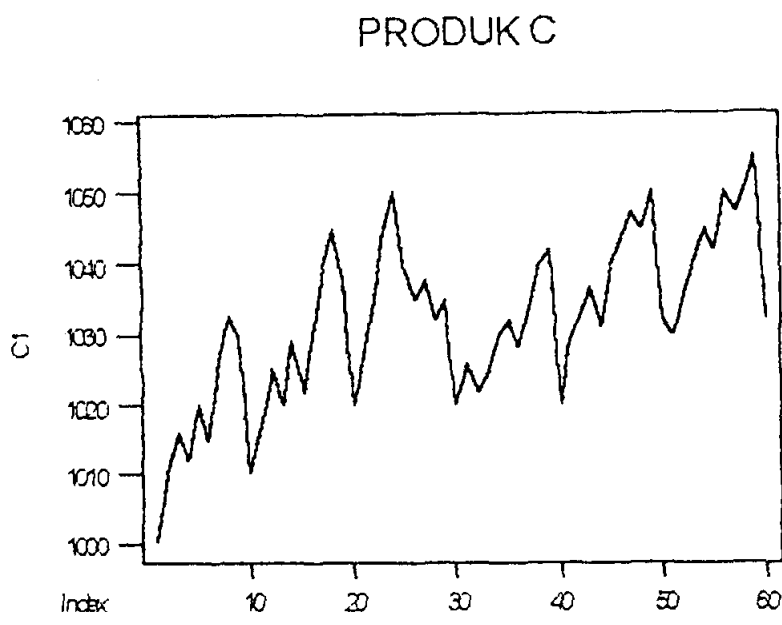
Kolmogorov-Smirnov Normality Test
 D+: 0.069 D-: 0.100 D: 0.100
 Approximate P-Value > 0.15

PRODUK B

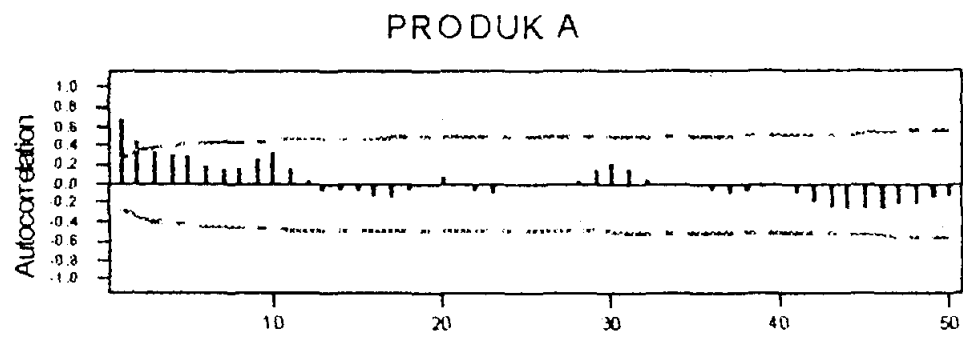


PRODUK C

Plot data awal

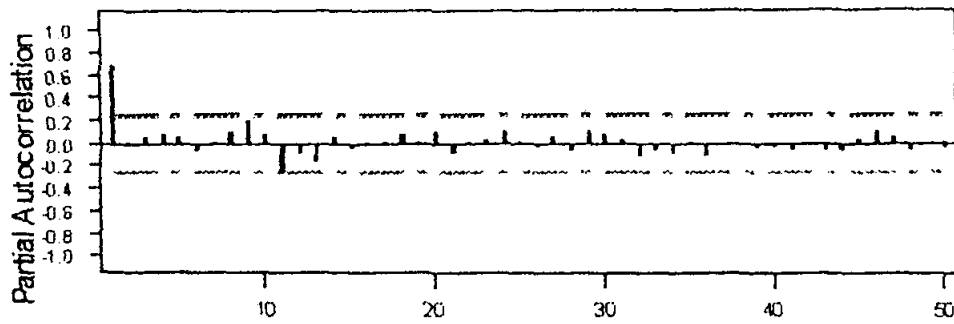


ACF DAN PACF



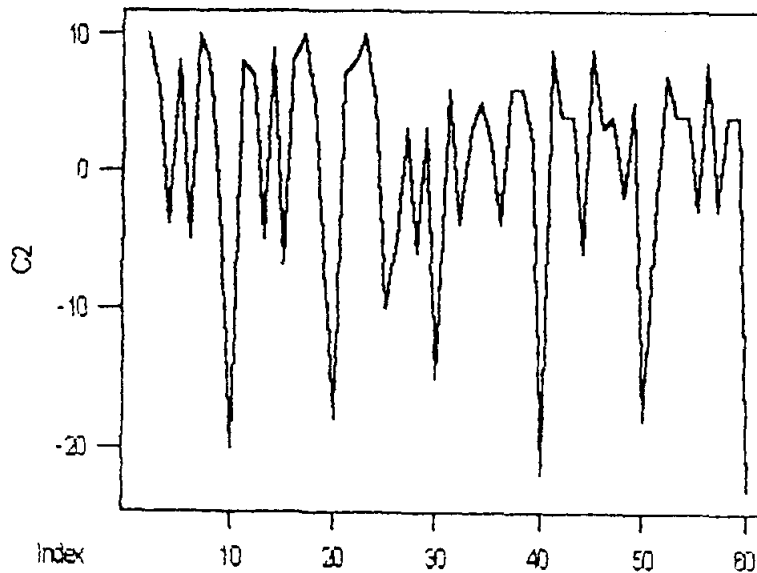
Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	0.67	5.20	28.46	13	-0.09	-0.37	83.75	25	0.00	0.02	91.05	37	0.11	-0.43	107.07	49	-0.15	-0.52	220.00
2	0.46	2.57	41.54	14	-0.07	-0.29	84.15	26	-0.02	-0.10	91.11	38	-0.08	-0.35	108.44	50	-0.12	-0.43	228.66
3	0.34	1.75	49.57	15	-0.08	-0.35	84.73	27	0.00	0.01	91.12	39	-0.04	-0.15	108.70				
4	0.30	1.47	55.69	16	-0.13	-0.52	86.09	28	0.04	0.15	91.27	40	-0.02	-0.09	108.79				
5	0.28	1.33	61.16	17	-0.14	-0.58	87.84	29	0.15	0.59	93.81	41	0.10	-0.38	110.61				
6	0.20	0.92	63.96	18	-0.08	-0.31	88.37	30	0.22	0.80	100.00	42	-0.19	-0.73	117.81				
7	0.15	0.66	65.48	19	0.01	0.05	88.38	31	0.17	0.67	103.68	43	-0.25	-0.97	131.62				
8	0.17	0.75	67.51	20	0.08	0.34	89.05	32	0.07	0.27	104.30	44	0.27	-1.04	149.16				
9	0.27	1.21	72.97	21	-0.01	-0.05	89.06	33	-0.00	0.01	104.30	45	-0.26	-0.98	168.36				
10	0.33	1.42	81.03	22	-0.09	-0.37	89.68	34	0.01	0.04	104.31	46	-0.27	-0.99	185.81				
11	0.16	0.68	83.05	23	-0.11	-0.43	91.00	35	0.00	0.02	104.32	47	0.23	-0.82	200.71				
12	0.03	0.12	83.11	24	-0.02	-0.08	91.05	36	-0.07	-0.28	105.11	48	-0.27	-0.78	215.76				

PRODUK C

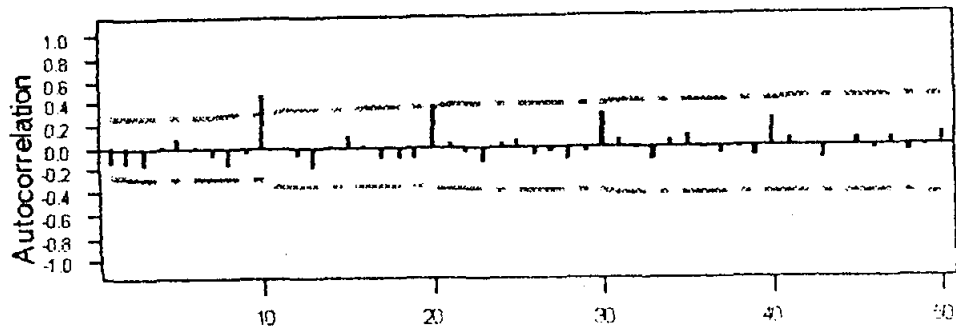


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	0.67	5.20	13	-0.17	-1.33	25	0.02	0.14	37	-0.00	-0.01	49	-0.02	-0.14
2	0.01	0.08	14	0.06	0.48	26	-0.03	-0.27	38	-0.00	-0.02	50	-0.05	-0.42
3	0.06	0.48	15	-0.05	-0.36	27	0.07	0.53	39	-0.06	-0.44			
4	0.09	0.67	16	0.00	0.01	28	-0.07	-0.56	40	-0.04	-0.31			
5	0.06	0.49	17	0.00	0.02	29	0.10	0.79	41	-0.08	-0.62			
6	-0.08	-0.58	18	0.07	0.55	30	0.08	0.60	42	-0.01	-0.07			
7	0.01	0.06	19	0.00	0.02	31	0.05	0.35	43	-0.07	-0.55			
8	0.10	0.79	20	0.10	0.78	32	-0.14	-1.06	44	-0.07	-0.55			
9	0.20	1.56	21	-0.11	-0.83	33	-0.09	-0.71	45	0.03	0.23			
10	0.09	0.64	22	0.00	0.02	34	-0.10	-0.75	46	0.11	0.82			
11	-0.28	-2.13	23	0.04	0.31	35	0.00	0.02	47	0.07	0.53			
12	-0.11	-0.87	24	0.11	0.85	36	-0.12	-0.96	48	-0.09	-0.70			

TRANSFORM : difference (1) PRODUK C

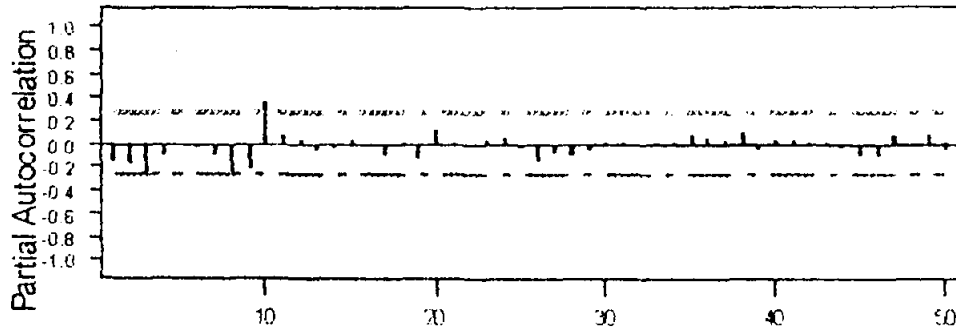


PRODUK c diff(1)



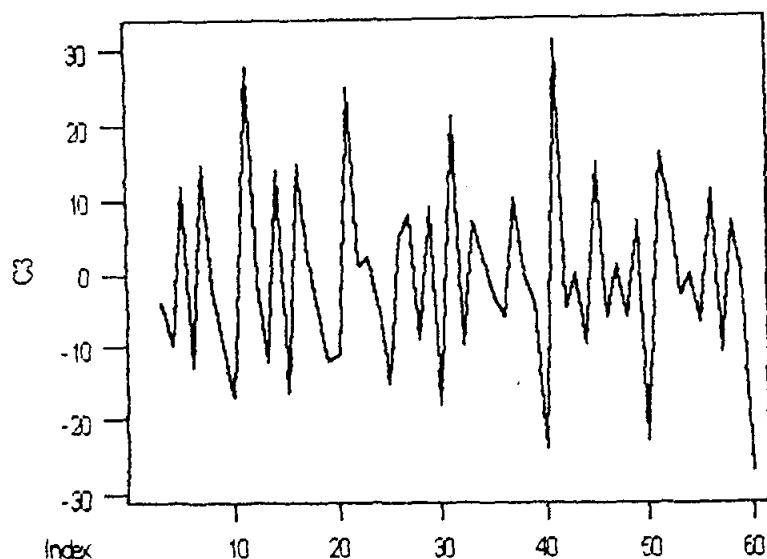
Lag	Corr	T	LRD	Lag	Corr	T	LRD	Lag	Corr	T	LRD	Lag	Corr	T	LRD	Lag	Corr	T	LRD
1	-0.14	-1.11	1.29	13	-0.20	-1.14	26.55	25	0.06	0.32	48.51	37	-0.07	-0.34	67.87	49	0.04	-0.19	91.22
2	-0.15	-1.16	2.79	14	0.01	0.03	28.55	26	-0.08	-0.42	49.25	38	-0.04	-0.22	68.22	50	0.11	0.58	95.67
3	-0.17	-1.26	4.68	15	0.11	0.65	29.61	27	-0.05	-0.29	49.61	39	0.10	0.50	70.19				
4	0.01	0.11	4.69	16	0.02	0.12	29.65	28	0.12	-0.63	51.30	40	0.24	1.14	80.94				
5	0.09	0.57	5.12	17	-0.11	-0.64	30.75	29	0.06	0.28	51.73	41	0.06	0.27	81.62				
6	0.02	0.13	5.14	18	0.10	0.57	31.64	30	0.29	1.45	62.11	42	0.23	1.11	81.71				
7	-0.09	-0.61	5.65	19	0.10	0.55	32.04	31	-0.25	-0.28	62.63	43	0.13	0.60	85.39				
8	-0.23	-1.91	8.10	20	0.07	0.09	45.51	32	-0.04	-0.20	63.05	44	-0.00	-0.00	85.39				
9	-0.06	-0.41	8.29	21	0.02	0.12	45.56	33	-0.12	-0.60	65.14	45	0.06	0.26	86.22				
10	0.48	3.29	25.12	22	-0.05	-0.25	45.78	34	0.05	0.25	65.51	46	-0.06	-0.30	87.37				
11	-0.01	-0.06	25.13	23	-0.15	-0.77	47.98	35	0.10	0.47	66.93	47	0.05	0.23	88.11				
12	-0.07	-0.44	25.55	24	0.03	0.17	48.10	36	-0.03	-0.15	67.07	48	-0.09	-0.41	90.63				

PRODUK C diff(1)

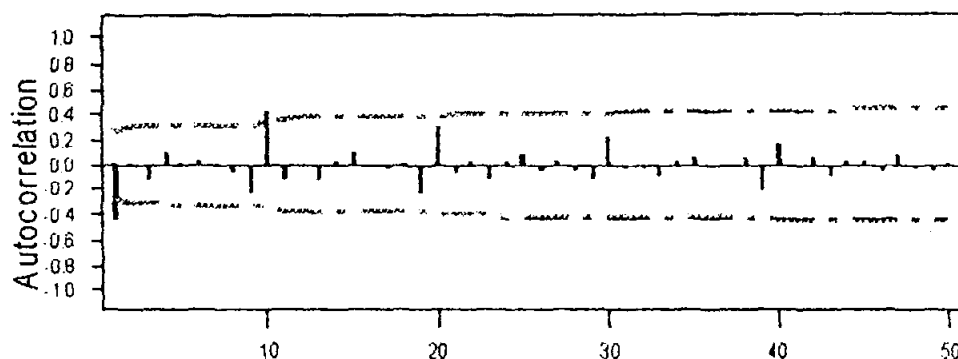


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.14	-1.11	13	-0.06	-0.46	25	-0.02	-0.18	37	0.03	0.25	49	0.07	0.54
2	-0.18	-1.37	14	-0.03	-0.23	26	-0.16	-1.23	38	0.12	0.89	50	-0.06	-0.42
3	-0.24	-1.81	15	0.05	0.35	27	-0.08	-0.59	39	-0.05	-0.41			
4	-0.10	-0.77	16	-0.02	-0.14	28	-0.10	-0.78	40	0.04	0.33			
5	-0.01	-0.10	17	-0.11	-0.83	29	-0.06	-0.45	41	0.04	0.32			
6	-0.02	-0.19	18	0.01	0.08	30	0.02	0.13	42	0.02	0.12			
7	-0.09	-0.71	19	-0.13	-0.99	31	0.02	0.16	43	0.00	0.04			
8	-0.23	-1.78	20	0.13	0.98	32	-0.00	-0.03	44	-0.04	-0.34			
9	-0.22	-1.69	21	0.02	0.13	33	0.01	0.07	45	-0.10	-0.80			
10	0.36	2.78	22	-0.01	-0.09	34	0.02	0.16	46	-0.10	-0.77			
11	0.08	0.58	23	0.04	0.31	35	0.07	0.57	47	0.07	0.56			
12	0.04	0.34	24	0.07	0.53	36	0.05	0.41	48	-0.02	-0.18			

TRANSFORM : difference (1,10) PRODUK C



PRODUK A diff(1,10)



Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	-0.46	-3.49	12.81	13	-0.12	-0.63	35.57	25	0.09	0.43	53.14	37	-0.01	-0.07	84.86	49	-0.06	0.28	90.30
2	0.01	0.09	12.83	14	0.02	0.13	35.61	26	-0.06	-0.31	53.57	38	0.06	0.28	85.49	50	0.00	0.02	90.31
3	-0.13	-0.81	13.84	15	0.11	0.57	36.54	27	0.03	0.13	53.65	39	-0.23	-1.06	74.77				
4	0.10	0.63	14.47	16	-0.02	-0.08	36.56	28	-0.06	-0.30	54.09	40	0.18	0.84	81.23				
5	0.01	0.09	14.49	17	-0.03	-0.16	36.64	29	-0.13	-0.63	56.09	41	-0.02	0.09	81.31				
6	0.04	0.25	14.59	18	0.02	0.10	36.67	30	0.23	1.10	62.58	42	0.05	0.24	81.90				
7	0.01	0.08	14.60	19	-0.24	-1.26	41.78	31	-0.03	-0.13	62.67	43	-0.11	-0.51	84.88				
8	-0.08	-0.49	15.02	20	0.30	1.56	50.28	32	-0.03	-0.16	62.83	44	0.03	0.15	85.15				
9	-0.25	-1.54	19.34	21	-0.07	-0.35	50.74	33	-0.09	-0.45	64.08	45	0.04	0.19	85.61				
10	0.44	2.63	33.29	22	0.03	0.14	50.82	34	0.04	0.21	64.35	46	-0.06	-0.29	86.78				
11	-0.13	-0.68	34.47	23	-0.12	-0.57	52.17	35	0.06	0.26	64.83	47	0.07	0.33	88.43				
12	-0.01	-0.04	34.48	24	0.04	0.19	52.33	36	-0.00	-0.02	64.83	48	-0.03	-0.14	88.78				

ARIMA MODEL (0,1,1)(1,1,1)¹⁰

ARIMA model for C1

Estimates at each iteration

Iteration	SSE	Parameters			
0	2750.58	0.100	0.100	0.100	-0.241
1	2170.34	-0.034	0.205	0.250	-0.303
2	2047.15	0.046	0.226	0.400	-0.276
3	1910.97	0.111	0.248	0.550	-0.255
4	1733.96	0.124	0.282	0.700	-0.242
5	1527.01	-0.026	0.350	0.781	-0.240
6	1437.90	-0.176	0.412	0.803	-0.217
7	1416.13	-0.248	0.450	0.818	-0.193
8	1412.48	-0.276	0.466	0.824	-0.178
9	1411.85	-0.287	0.473	0.826	-0.171
10	1411.75	-0.291	0.476	0.828	-0.168
11	1411.73	-0.293	0.477	0.828	-0.166
12	1411.73	-0.294	0.477	0.828	-0.166
13	1411.73	-0.294	0.477	0.828	-0.165
14	1411.73	-0.294	0.477	0.828	-0.165

Relative change in each estimate less than 0.0010

Final Estimates of Parameters

Type	Coef	StDev	T
SAR 10	-0.2940	0.1677	-1.75
MA 1	0.4774	0.1301	3.67
SMA 10	0.8284	0.1533	5.40
Constant	-0.16534	0.08533	-1.94

Differencing: 1 regular, 1 seasonal of order 10

Number of observations: Original series 60, after differencing 49

Residuals: SS = 1271.75 (backforecasts excluded)

MS = 28.26 DF = 45

Modified Box-Pierce (Ljung-Box) Chi-Square statistic

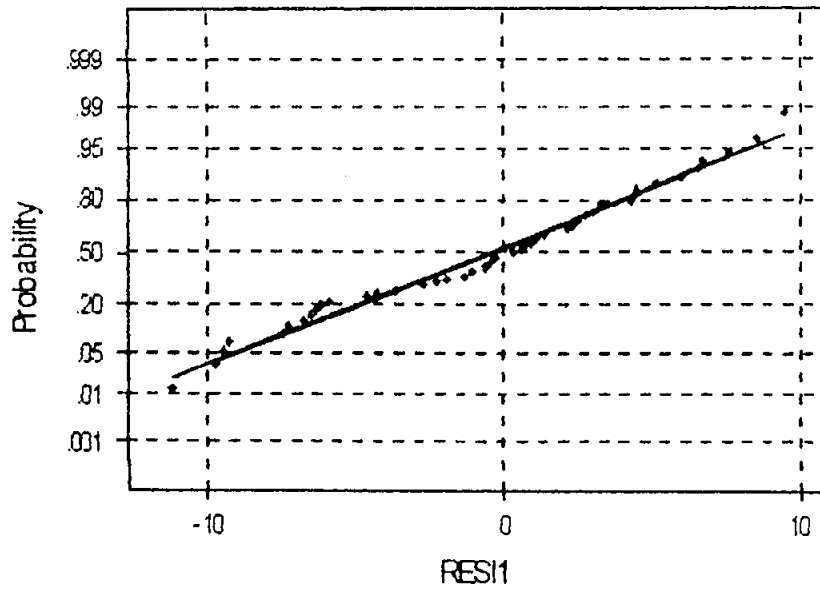
Lag	12	24	36	48
Chi-Square	9.7(DF=9)	16.9(DF=21)	27.0(DF=33)	35.9(DF=45)

Forecasts from period 60

95 Percent Limits

Period	Forecast	Lower	Upper
61	1040.07	1029.65	1050.49
62	1043.81	1032.05	1055.57
63	1046.93	1033.97	1059.89
64	1046.98	1032.93	1061.04
65	1048.40	1033.33	1063.48
66	1047.43	1031.40	1063.46
67	1053.56	1036.63	1070.48
68	1054.11	1036.33	1071.89
69	1054.52	1035.92	1073.12
70	1035.44	1016.06	1054.82
71	1039.95	1020.12	1059.77
72	1044.48	1024.09	1064.87

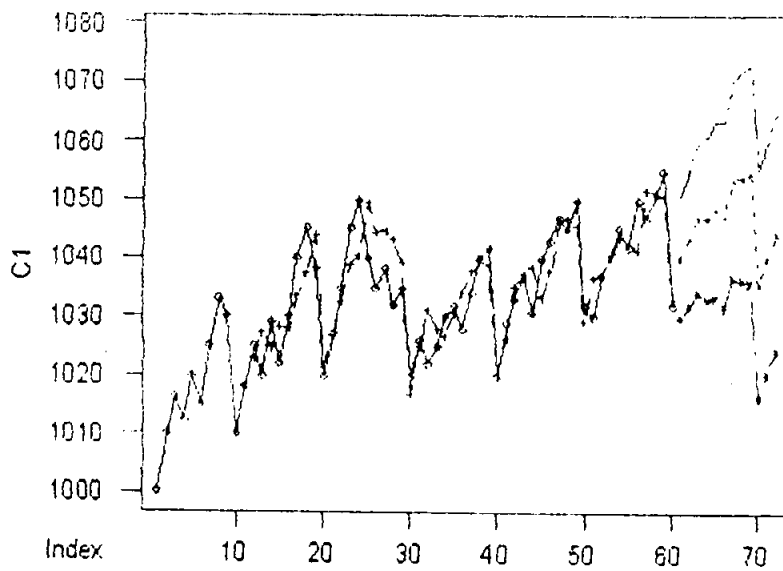
PRODUK C



Average: -0.402363
 StdDev: 5.13123
 N: 49

Kolmogorov-Smirnov Normality Test
 D+: 0.062 D-: 0.094 D: 0.094
 Approximate P-Value > 0.15

PRODUK C

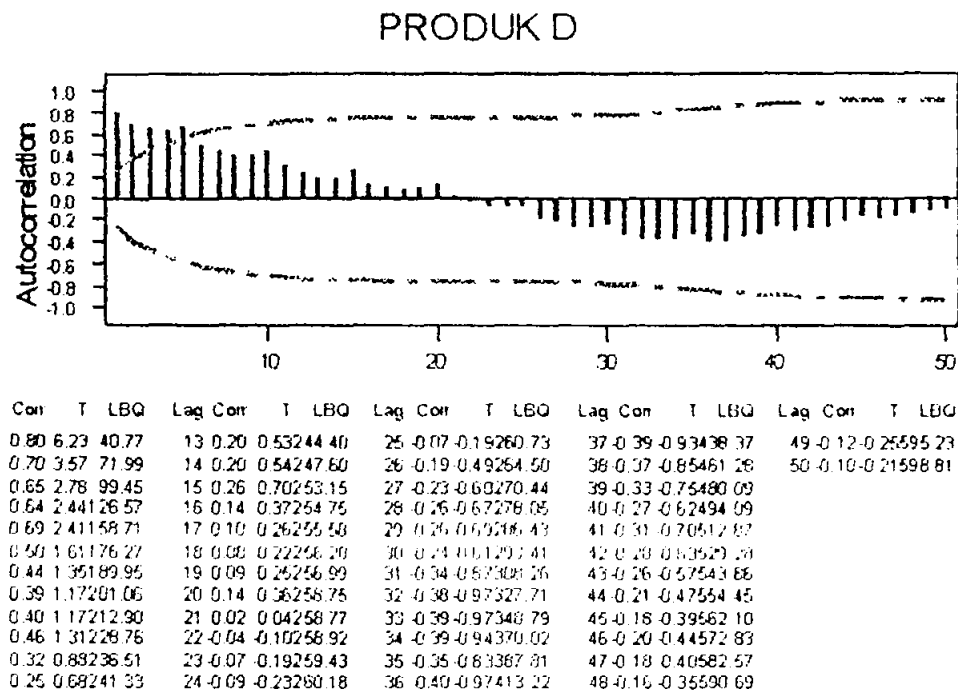


PRODUK D

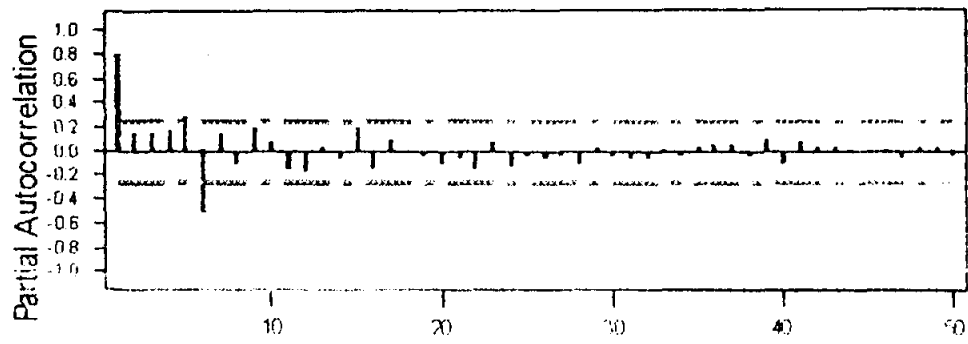
Plot data awal



ACF DAN PACF

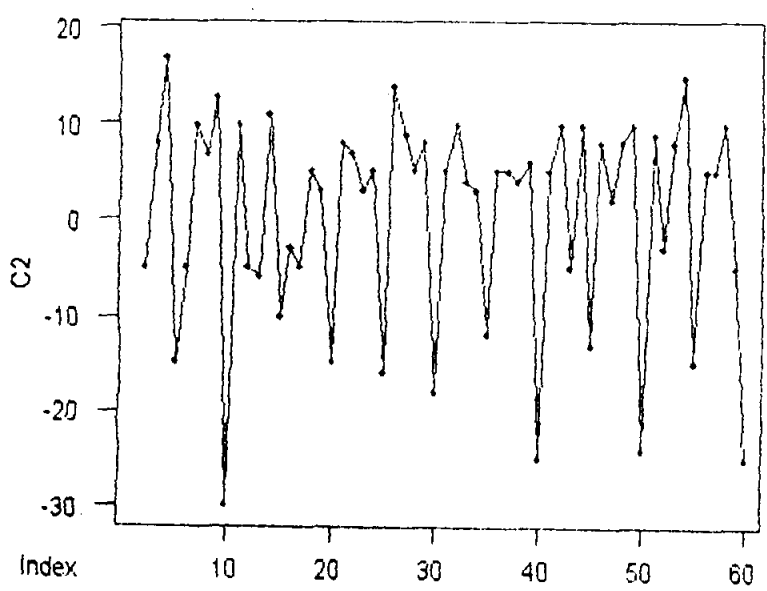


PRODUK D

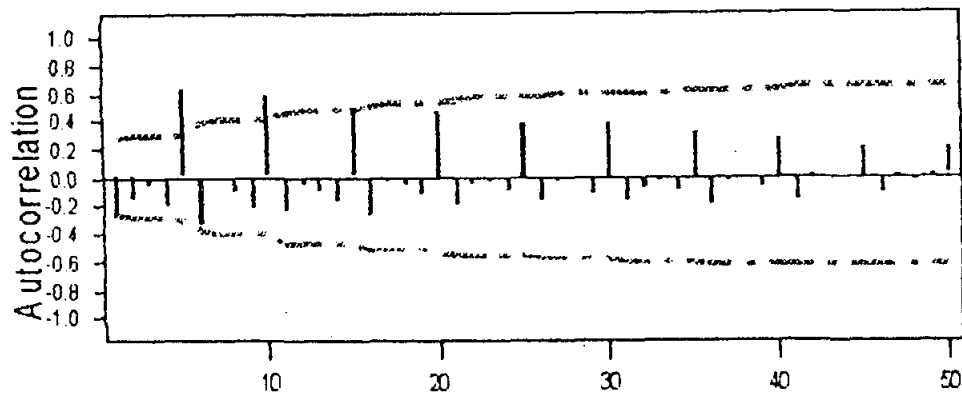


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	0.80	6.23	13	0.03	0.21	25	-0.04	-0.26	37	0.07	0.51	49	0.03	0.26
2	0.14	1.12	14	-0.06	-0.43	26	-0.06	-0.48	38	-0.03	-0.27	50	-0.04	-0.32
3	0.15	1.18	15	0.19	1.51	27	-0.02	-0.18	39	0.10	0.80			
4	0.17	1.30	16	-0.14	-1.09	28	-0.10	-0.77	40	-0.10	-0.78			
5	0.29	2.25	17	0.11	0.87	29	0.04	0.30	41	0.09	0.68			
6	-0.52	-4.06	18	-0.02	-0.16	30	-0.04	-0.32	42	0.02	0.18			
7	0.16	1.23	19	-0.04	-0.30	31	-0.07	-0.52	43	0.03	0.24			
8	-0.10	-0.75	20	-0.10	-0.75	32	-0.06	-0.44	44	0.02	0.14			
9	0.19	1.48	21	-0.05	-0.40	33	0.02	0.16	45	-0.02	-0.15			
10	0.09	0.71	22	-0.15	-1.17	34	-0.04	-0.31	46	0.00	0.01			
11	-0.15	-1.15	23	0.09	0.67	35	0.03	0.26	47	-0.06	-0.45			
12	-0.18	-1.40	24	-0.13	-0.90	36	0.06	0.44	48	0.03	0.26			

TRANSFORM : diff (1)PRODUK D

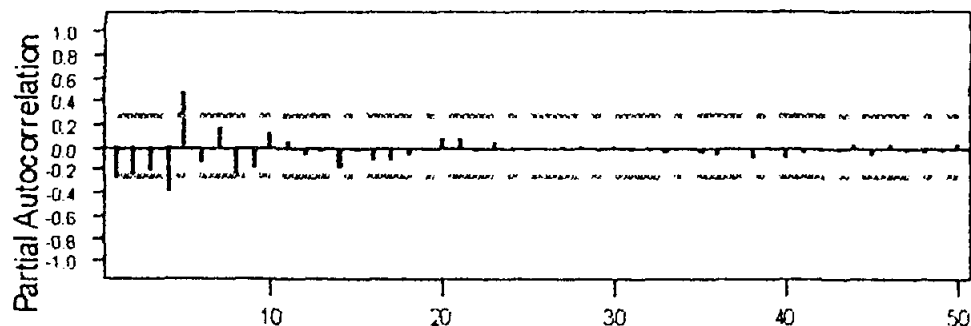


PRODUK D diff(1)



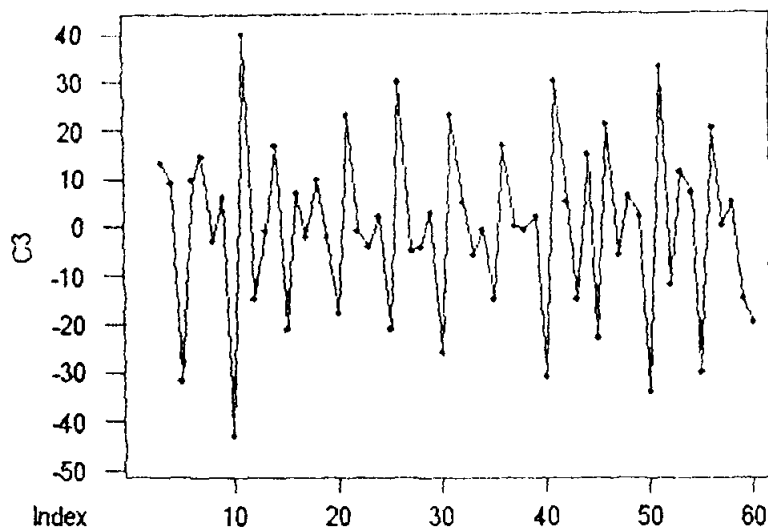
Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	-0.30	-2.29	5.53	13	-0.11	-0.46	79.28	25	0.39	1.38	152.81	37	-0.02	-0.06	202.26	49	0.00	0.01	236.76
2	-0.15	-1.04	6.08	14	-0.19	-0.78	82.02	26	-0.18	-0.64	156.31	38	-0.02	-0.07	202.34	50	0.19	0.58	250.49
3	-0.05	-0.34	7.04	15	0.50	2.08	102.18	27	-0.03	-0.11	158.43	39	-0.08	-0.27	203.55				
4	-0.20	-1.39	9.65	16	-0.26	-1.01	107.81	28	-0.02	-0.08	158.48	40	0.26	0.85	216.70				
5	0.63	4.25	36.30	17	-0.04	-0.17	107.98	29	-0.13	-0.45	158.57	41	-0.17	-0.53	222.30				
6	-0.33	-1.74	43.66	18	-0.06	-0.25	108.34	30	0.38	1.29	176.03	42	0.00	0.01	222.31				
7	-0.00	-0.02	43.67	19	-0.13	-0.48	108.78	31	-0.17	-0.56	179.53	43	-0.02	-0.07	222.42				
8	-0.11	-0.54	44.49	20	0.48	1.84	131.18	32	-0.07	-0.23	180.25	44	-0.02	-0.07	222.54				
9	-0.22	-1.12	48.08	21	-0.20	-0.74	135.11	33	-0.02	-0.08	180.33	45	0.19	0.60	231.77				
10	0.58	2.69	73.46	22	-0.05	-0.18	135.35	34	-0.11	-0.37	182.09	46	-0.12	-0.39	235.97				
11	-0.25	-1.08	78.13	23	-0.03	-0.11	135.45	35	0.30	1.00	185.82	47	0.02	0.07	236.12				
12	-0.05	-0.22	78.35	24	-0.11	-0.40	136.78	36	-0.20	-0.65	202.17	48	-0.04	-0.14	236.75				

PRODUK D diff(1)

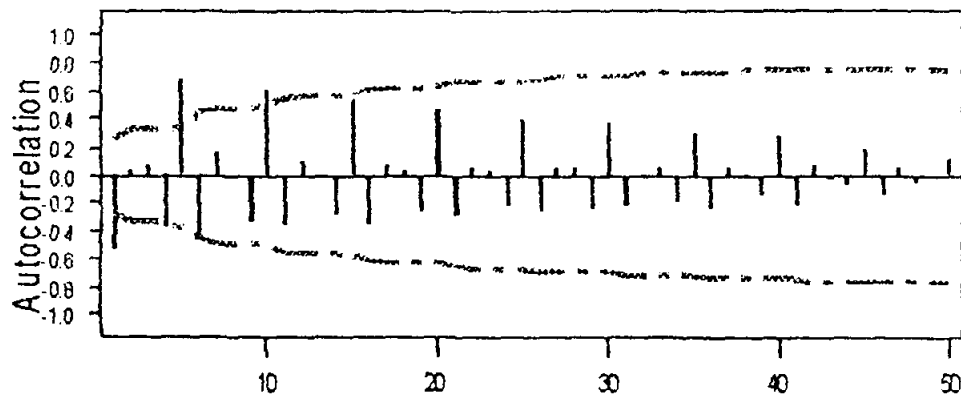


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.30	-2.29	13	-0.04	-0.34	25	-0.04	-0.31	37	-0.01	-0.07	49	-0.03	-0.21
2	-0.26	-1.99	14	-0.20	-1.51	26	-0.00	-0.01	38	-0.10	-0.76	50	0.04	0.28
3	-0.21	-1.64	15	-0.04	-0.28	27	0.01	0.09	39	0.01	0.10			
4	-0.41	-3.17	16	-0.12	-0.92	28	0.01	0.09	40	-0.10	-0.75			
5	0.48	3.70	17	-0.13	-1.00	29	-0.04	-0.31	41	-0.06	-0.45			
6	-0.14	-1.08	18	-0.09	-0.68	30	0.01	0.07	42	0.04	0.33			
7	0.17	1.30	19	-0.01	-0.10	31	-0.04	-0.32	43	-0.03	-0.23			
8	-0.24	-1.82	20	0.07	0.55	32	-0.05	-0.35	44	0.04	0.34			
9	-0.20	-1.56	21	0.09	0.69	33	-0.05	-0.38	45	-0.08	-0.59			
10	0.12	0.94	22	-0.03	-0.22	34	-0.01	-0.09	46	0.02	0.13			
11	0.07	0.50	23	0.05	0.40	35	-0.06	-0.45	47	-0.03	-0.19			
12	-0.09	-0.69	24	-0.02	-0.18	36	-0.08	-0.62	48	-0.06	-0.46			

TRANSFORM : diff (1,5)PRODUK D

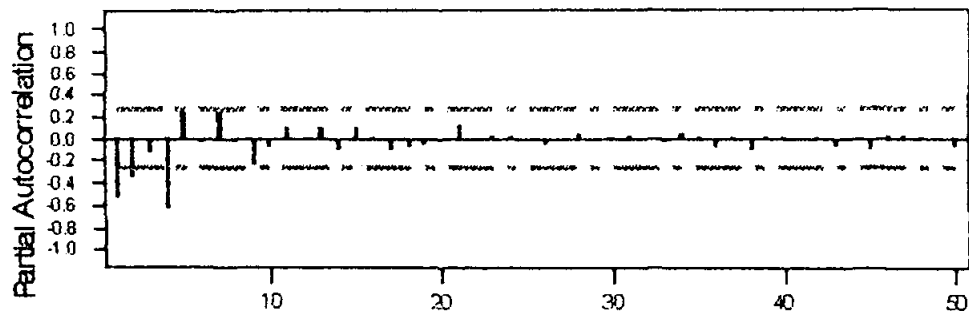


PRODUK D diff(1,5)



Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	-0.55	-4.17	18.32	13	-0.01	-0.02	122.77	25	0.40	1.20	221.93	37	0.07	0.18	294.18	49	-0.02	-0.06	346.17
2	0.05	0.27	18.45	14	-0.29	-1.03	129.53	26	-0.27	-0.78	229.82	38	0.02	0.06	294.26	50	0.12	0.30	352.03
3	0.08	0.50	18.68	15	0.54	1.88	153.48	27	0.06	0.17	230.21	39	-0.15	-0.41	298.46				
4	-0.39	-2.33	28.66	16	-0.35	-1.15	163.78	28	0.05	0.14	230.48	40	0.28	0.75	313.50				
5	0.69	3.61	60.19	17	0.07	0.23	164.22	29	-0.25	-0.71	237.77	41	-0.22	-0.55	323.39				
6	-0.47	-2.12	75.15	18	0.03	0.11	164.32	30	0.39	1.10	256.42	42	0.08	0.23	324.98				
7	0.16	0.68	76.96	19	-0.27	-0.86	170.74	31	-0.22	-0.61	262.67	43	-0.03	-0.08	325.21				
8	-0.02	-0.10	77.00	20	0.47	1.50	181.30	32	0.02	0.04	262.70	44	-0.08	-0.20	326.65				
9	-0.34	-1.42	85.30	21	-0.29	-0.89	199.39	33	0.05	0.15	263.11	45	0.20	0.52	337.09				
10	0.61	2.43	112.07	22	0.05	0.16	199.64	34	-0.19	-0.52	268.23	46	-0.15	-0.40	343.79				
11	-0.37	-1.33	121.98	23	0.04	0.11	199.76	35	0.32	0.88	284.12	47	0.06	0.16	344.95				
12	0.10	0.37	122.77	24	-0.22	-0.67	204.89	36	-0.24	-0.66	293.43	48	-0.05	-0.14	345.97				

PRODUK D diff(1,5)



Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.55	-4.17	13	0.10	0.76	25	-0.02	-0.12	37	0.02	0.12	49	-0.02	-0.13
2	0.36	2.77	14	-0.09	-0.71	26	-0.06	-0.48	38	-0.10	-0.74	50	-0.09	-0.68
3	-0.14	-1.04	15	0.11	0.82	27	-0.00	-0.02	39	0.01	0.11			
4	-0.63	-4.62	16	0.00	0.02	28	0.06	0.43	40	0.01	0.04			
5	0.26	2.01	17	-0.10	-0.79	29	-0.02	-0.15	41	-0.02	-0.12			
6	-0.02	-0.18	18	-0.09	-0.70	30	0.02	0.13	42	0.02	0.13			
7	0.24	1.79	19	-0.05	-0.37	31	0.04	0.32	43	-0.08	-0.64			
8	-0.02	-0.12	20	-0.00	-0.02	32	-0.01	-0.04	44	-0.01	-0.09			
9	-0.25	-1.91	21	0.12	0.91	33	-0.03	-0.23	45	-0.11	-0.84			
10	-0.08	-0.64	22	-0.00	-0.02	34	0.05	0.36	46	0.02	0.19			
11	0.10	0.78	23	0.02	0.18	35	0.00	0.03	47	0.03	0.23			
12	-0.02	-0.13	24	0.04	0.27	36	-0.08	-0.62	48	0.01	0.04			

ARIMA MODEL (0,1,0)(1,1,1)⁵

ARIMA model for C1

Estimates at each iteration

Iteration	SSE	Parameters		
0	3890.69	0.100	0.100	-0.077
1	2978.05	-0.050	0.249	-0.031
2	2757.02	-0.004	0.399	-0.019
3	2469.28	-0.019	0.549	0.004
4	2173.14	-0.113	0.699	0.044
5	1996.03	-0.165	0.844	0.071
6	1956.94	-0.219	0.916	0.074
7	1936.78	-0.292	0.891	0.094
8	1935.22	-0.300	0.901	0.091
9	1935.04	-0.309	0.898	0.094
10	1934.99	-0.310	0.900	0.094
11	1934.98	-0.311	0.899	0.094
12	1934.98	-0.311	0.900	0.094

Relative change in each estimate less than 0.0010

Final Estimates of Parameters

Type	Coef	StDev	T
SAR 5	-0.3114	0.1487	-2.09
SMA 5	0.8995	0.0938	9.58
Constant	0.0942	0.1030	0.91

Differencing: 1 regular, 1 seasonal of order 5

Number of observations: Original series 60, after differencing 54

Residuals: SS = 1708.22 (backforecasts excluded)

MS = 33.49 DF = 51

Modified Box-Pierce (Ljung-Box) Chi-Square statistic

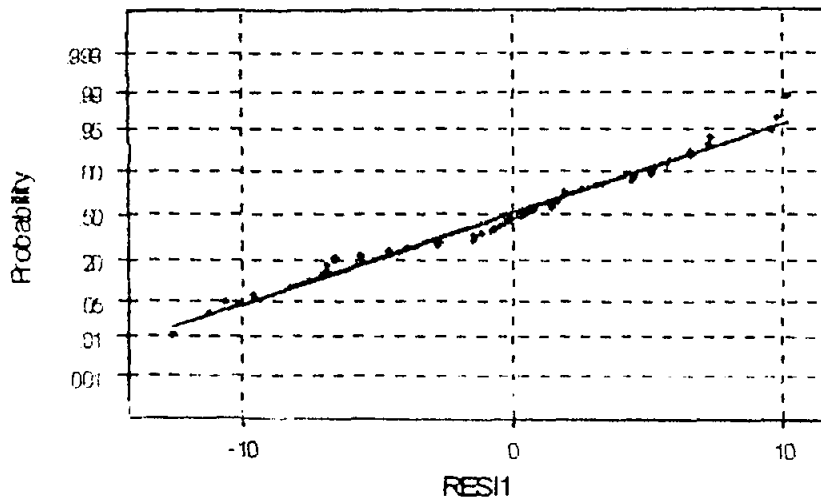
Lag	12	24	36	48
Chi-Square	8.6(DF=10)	14.7(DF=22)	24.1(DF=34)	40.7(DF=46)

Forecasts from period 60

95 Percent Limits

Period	Forecast	Lower	Upper
61	1237.07	1225.72	1248.41
62	1240.09	1224.04	1256.13
63	1243.63	1223.97	1263.28
64	1256.33	1233.64	1279.02
65	1240.76	1215.39	1266.13
66	1247.27	1220.37	1274.18
67	1251.00	1222.65	1279.36
68	1256.65	1226.92	1286.38
69	1263.94	1232.88	1294.99
70	1245.52	1213.20	1277.84
71	1252.30	1218.22	1286.39
72	1255.91	1220.14	1291.67

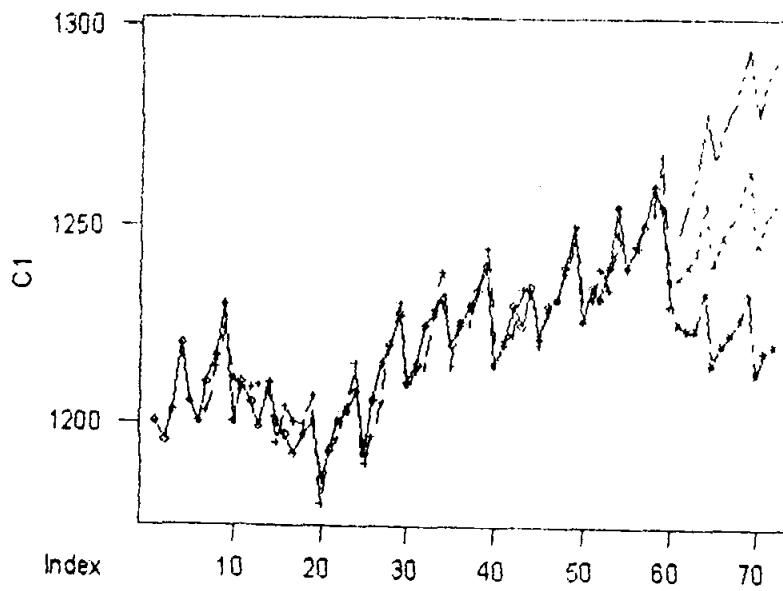
PRODUK D



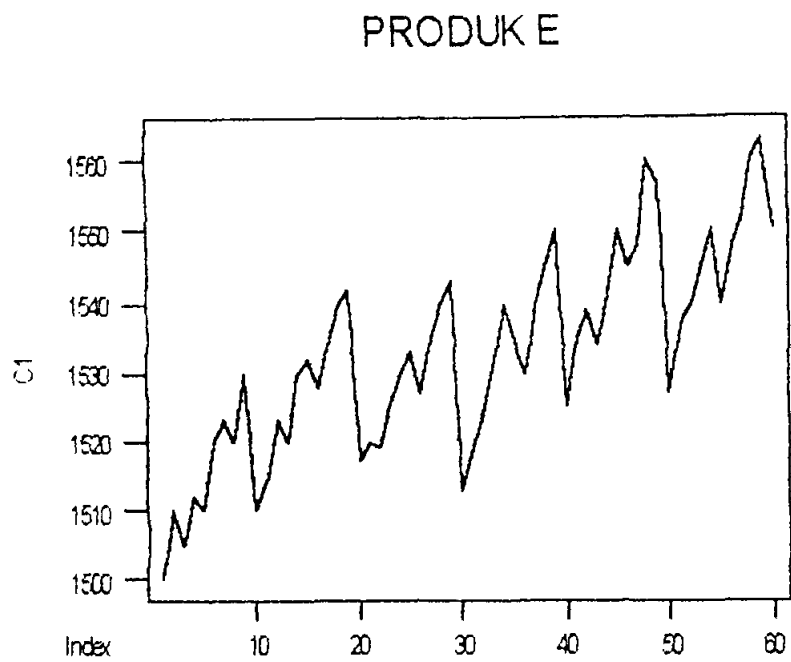
Average: -0.216867
 StDev: 5.67297
 N: 54

Kolmogorov-Smirnov Normality Test
 D+ = 0.091 D- = 0.098 D = 0.098
 Approximate P-Value > 0.15

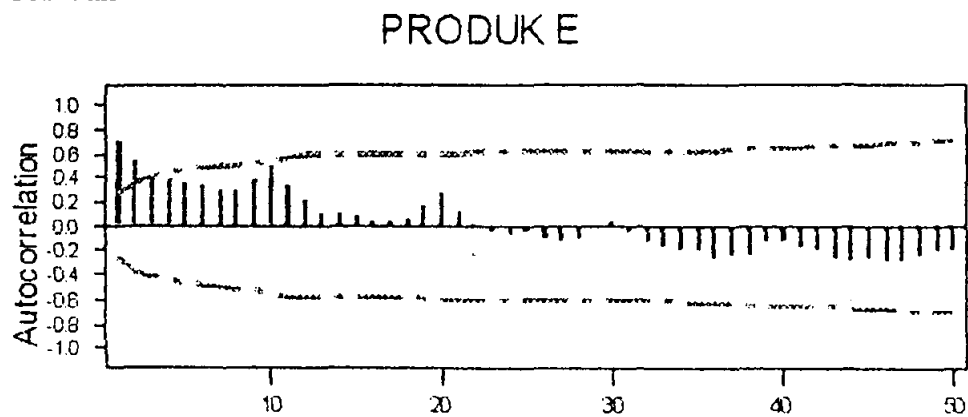
PRODUK D



PRODUK E
Plot data awal

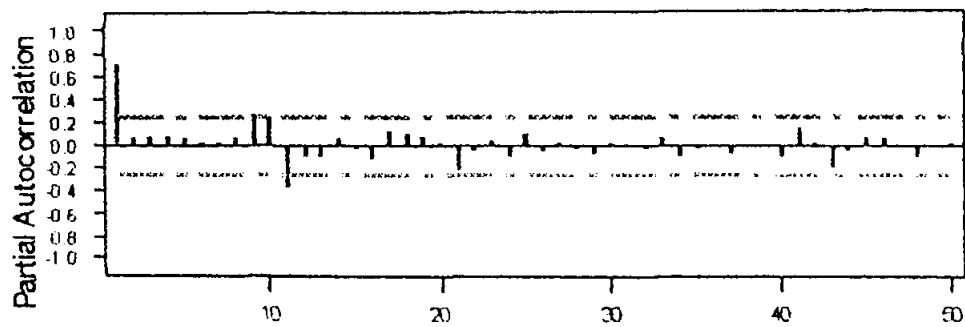


Plot ACF dan PACF



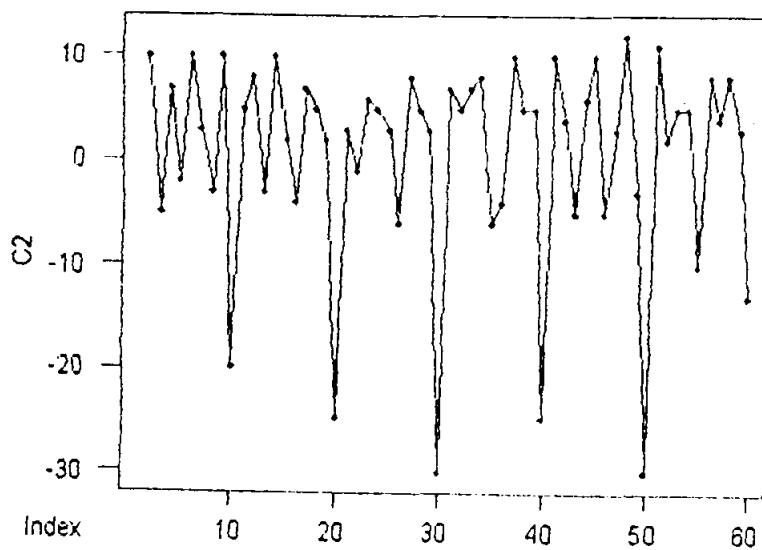
Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ
1	0.71	5.50	31.79	13	0.11	0.36	142.74	25	-0.06	0.10	151.01	37	-0.26	0.81	200.39	49	0.19	0.54	337.17
2	0.54	2.93	50.22	14	0.10	0.35	143.59	26	0.11	0.36	156.01	38	-0.24	0.76	210.23	50	-0.19	0.55	373.19
3	0.44	2.10	62.65	15	0.09	0.29	144.20	27	-0.12	0.39	159.56	39	-0.14	0.43	213.64				
4	0.39	1.76	72.81	16	0.02	0.08	144.25	28	-0.11	0.35	160.87	40	-0.13	0.40	216.87				
5	0.36	1.55	81.65	17	0.03	0.08	144.30	29	-0.00	0.01	160.87	41	-0.17	0.52	222.28				
6	0.32	1.34	88.82	18	0.05	0.18	144.56	30	0.04	0.14	161.09	42	-0.20	0.61	230.37				
7	0.29	1.15	94.69	19	0.18	0.61	147.51	31	-0.05	0.18	161.46	43	-0.26	0.81	245.70				
8	0.28	1.09	100.23	20	0.26	0.89	154.02	32	-0.13	0.44	163.82	44	-0.29	0.87	266.18				
9	0.39	1.49	111.25	21	0.12	0.40	155.39	33	-0.19	0.58	169.13	45	-0.27	0.79	282.64				
10	0.50	1.86	130.04	22	0.01	0.03	155.39	34	-0.19	0.63	173.49	46	-0.29	0.87	306.50				
11	0.33	1.18	139.35	23	-0.06	-0.19	155.70	35	-0.20	0.66	179.64	47	-0.28	0.81	327.75				
12	0.21	0.72	141.76	24	-0.07	-0.24	158.24	36	-0.26	0.83	189.91	48	-0.25	0.72	347.18				

PRODUK E

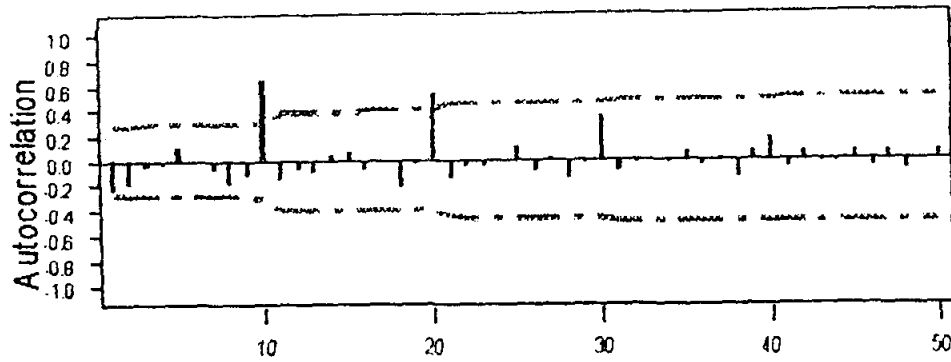


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	0.71	5.50	13	-0.10	-0.74	25	0.10	0.74	37	-0.07	-0.57	49	-0.01	-0.06
2	0.06	0.50	14	0.05	0.42	26	-0.06	-0.49	38	-0.01	-0.09	50	-0.02	-0.13
3	0.07	0.54	15	-0.03	-0.20	27	0.02	0.16	39	-0.00	-0.03			
4	0.09	0.69	16	-0.13	-1.00	28	-0.03	-0.24	40	-0.09	-0.73			
5	0.06	0.47	17	0.13	1.04	29	-0.09	-0.71	41	0.16	1.24			
6	0.02	0.16	18	0.10	0.78	30	0.00	0.03	42	0.01	0.11			
7	0.01	0.10	19	0.09	0.67	31	-0.00	-0.03	43	-0.20	-1.51			
8	0.06	0.47	20	0.02	0.15	32	-0.03	-0.23	44	-0.07	-0.52			
9	0.28	2.15	21	-0.23	-1.74	33	0.05	0.38	45	0.05	0.39			
10	0.23	1.81	22	-0.05	-0.38	34	-0.11	-0.85	46	0.06	0.48			
11	-0.38	-2.98	23	0.03	0.24	35	-0.05	-0.35	47	-0.00	-0.01			
12	-0.11	-0.83	24	-0.11	-0.82	36	-0.01	-0.04	48	-0.11	-0.87			

TRANSFORM : difference (1) PRODUK E

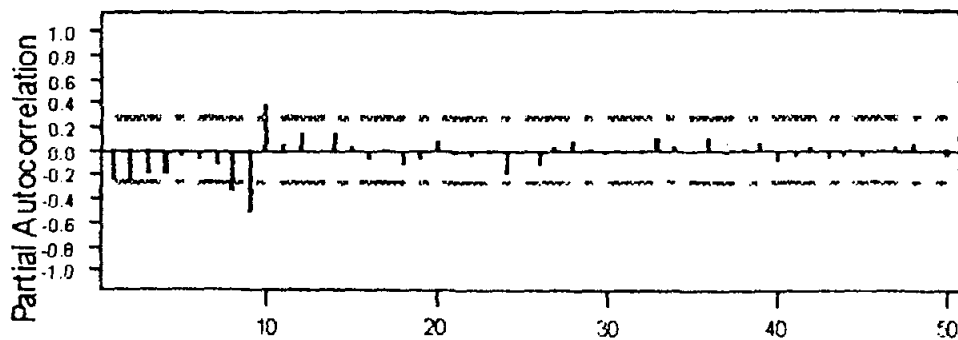


PRODUK E diff(1)



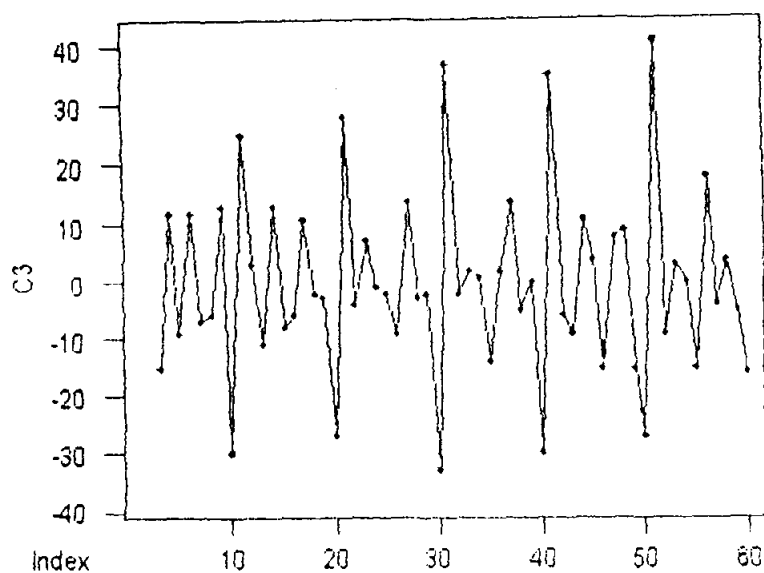
Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO	Lag	Corr	T	LBO
1	-0.24	-1.83	3.53	13	-0.10	-0.53	48.88	25	0.11	0.47	82.87	37	0.02	0.09	106.09	49	-0.01	-0.02	126.08
2	-0.19	-1.37	5.76	14	0.03	0.16	46.96	26	-0.09	-0.41	83.85	38	-0.15	-0.81	109.79	50	0.07	0.26	127.97
3	-0.06	-0.42	5.98	15	0.06	0.30	47.24	27	0.02	0.09	83.90	39	0.05	0.20	110.20				
4	-0.04	-0.28	6.09	16	-0.07	-0.36	47.68	28	-0.16	-0.70	86.68	40	0.18	0.73	116.12				
5	0.09	0.66	6.68	17	-0.01	0.07	47.69	29	-0.04	-0.16	87.05	41	0.09	-0.35	117.61				
6	-0.02	-0.11	6.70	18	-0.21	-1.08	51.73	30	0.36	1.57	103.42	42	0.05	0.22	118.23				
7	-0.07	-0.49	7.04	19	-0.04	-0.22	51.91	31	-0.10	-0.43	104.80	43	-0.05	-0.19	118.70				
8	-0.19	-1.29	9.48	20	0.54	2.64	78.41	32	0.03	0.14	104.95	44	0.03	0.12	118.91				
9	0.12	-0.81	10.52	21	-0.16	-0.71	80.86	33	-0.00	-0.00	104.95	45	0.07	0.27	120.09				
10	0.67	4.49	43.63	22	-0.05	-0.24	81.15	34	-0.03	-0.12	105.06	46	-0.07	-0.29	121.49				
11	-0.16	-0.82	45.53	23	-0.07	-0.30	81.60	35	0.05	0.21	105.45	47	0.07	0.27	122.87				
12	-0.08	-0.42	46.03	24	-0.02	-0.10	81.65	36	-0.06	-0.25	106.02	48	-0.10	-0.40	126.07				

PRODUK E diff(1)

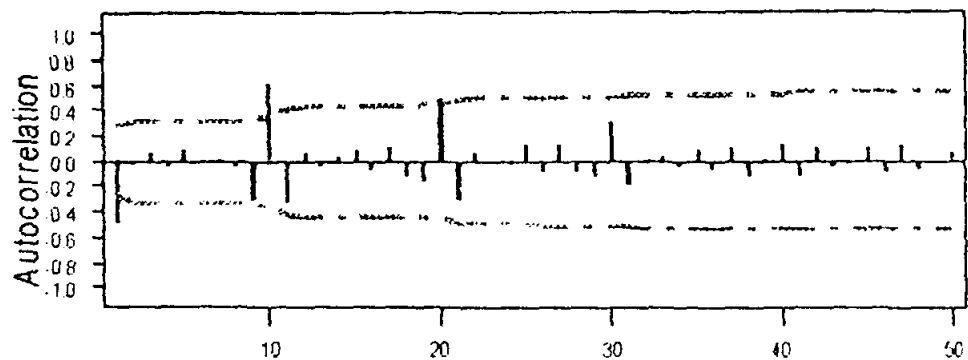


Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.24	-1.83	13	-0.02	-0.16	25	-0.01	-0.08	37	-0.03	-0.23	49	0.02	0.15
2	-0.26	-1.99	14	0.16	1.20	26	-0.13	-1.02	38	0.01	0.09	50	-0.07	-0.53
3	-0.20	-1.55	15	0.04	0.29	27	0.03	0.20	39	0.05	0.39			
4	-0.20	-1.54	16	-0.09	-0.71	28	0.08	0.64	40	-0.11	-0.85			
5	-0.05	-0.41	17	0.00	0.03	29	0.02	0.13	41	-0.06	-0.47			
6	-0.06	-0.62	18	-0.13	-0.97	30	-0.04	-0.32	42	0.04	0.28			
7	-0.13	-0.96	19	-0.08	-0.59	31	-0.04	-0.31	43	-0.07	-0.56			
8	-0.33	-2.57	20	0.08	0.60	32	-0.04	-0.33	44	-0.05	-0.40			
9	-0.52	-3.99	21	-0.03	-0.23	33	0.10	0.77	45	-0.05	-0.36			
10	0.39	2.97	22	-0.06	-0.47	34	0.04	0.27	46	-0.02	-0.14			
11	0.07	0.50	23	0.00	0.03	35	-0.00	-0.03	47	0.04	0.33			
12	0.15	1.18	24	-0.19	-1.42	36	0.10	0.77	48	0.07	0.50			

TRANSFORM : difference (1,10) PRODUK E

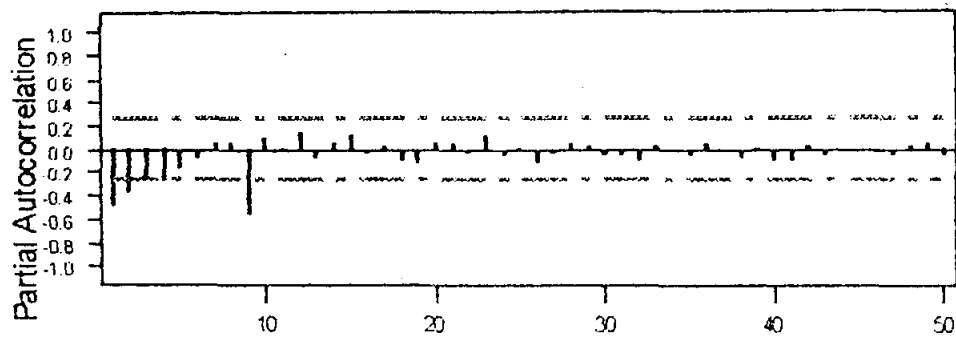


PRODUK E diff(1,10)



Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ	Lag	Corr	T	LBQ
1	0.51	3.85	15.59	13	0.07	0.32	60.77	25	0.12	0.50	100.16	37	0.10	0.39	128.55	49	0.02	0.08	155.14
2	0.04	0.22	15.66	14	0.04	0.18	60.90	26	0.12	0.46	101.60	38	0.14	0.51	131.77	50	0.05	0.19	156.25
3	0.05	0.29	15.81	15	0.07	0.33	61.32	27	0.12	0.49	103.27	39	0.01	0.03	131.78				
4	0.05	0.32	15.98	16	0.08	0.37	61.87	28	0.10	0.41	104.53	40	0.14	0.51	135.39				
5	0.09	0.54	16.46	17	0.10	0.45	62.68	29	0.14	0.54	106.80	41	0.13	0.50	139.05				
6	0.00	0.03	16.48	18	0.13	0.57	64.04	30	0.32	1.26	119.58	42	0.09	0.35	140.98				
7	0.02	0.10	16.50	19	0.10	0.82	66.99	31	0.19	0.73	124.25	43	0.05	0.19	141.54				
8	0.05	0.35	16.73	20	0.49	2.21	69.27	32	0.02	0.06	124.29	44	0.04	0.13	141.94				
9	0.31	1.88	23.40	21	0.31	1.26	98.07	33	0.04	0.14	124.48	45	0.10	0.36	144.36				
10	0.62	3.61	51.87	22	0.05	0.20	98.90	34	0.09	0.29	125.00	46	0.11	0.42	148.03				
11	0.34	1.62	90.23	23	0.02	0.07	98.93	35	0.08	0.29	125.91	47	0.12	0.45	152.82				
12	0.05	0.22	60.40	24	0.04	0.17	98.52	36	0.07	0.26	126.79	48	0.08	0.29	154.93				

PRODUK E diff(1,10)



Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T	Lag	PAC	T
1	-0.51	-3.85	13	-0.08	-0.64	25	0.02	0.15	37	-0.02	-0.13	49	0.05	0.41
2	0.39	2.97	14	0.06	0.48	26	-0.13	-1.01	38	-0.08	-0.63	50	-0.06	-0.49
3	-0.28	-2.10	15	0.13	0.99	27	-0.04	-0.31	39	0.01	0.08			
4	-0.30	-2.26	16	-0.04	-0.30	28	0.06	0.48	40	-0.10	-0.78			
5	-0.17	-1.30	17	0.03	0.24	29	0.03	0.20	41	-0.09	-0.71			
6	-0.07	-0.55	18	-0.11	-0.81	30	-0.06	-0.42	42	0.05	0.34			
7	0.06	0.49	19	-0.13	-1.00	31	-0.06	-0.42	43	-0.06	-0.43			
8	0.06	0.43	20	0.06	0.49	32	-0.11	-0.82	44	-0.02	-0.12			
9	-0.56	-4.30	21	0.05	0.37	33	0.03	0.26	45	-0.02	-0.17			
10	0.11	0.81	22	-0.03	-0.19	34	-0.00	-0.03	46	-0.03	-0.25			
11	0.02	0.16	23	0.12	0.91	35	-0.07	-0.52	47	-0.07	-0.51			
12	0.15	1.18	24	-0.05	-0.40	36	0.06	0.46	48	0.03	0.19			

ARIMA MODEL (1,1,1)(0,1,1)¹⁰

ARIMA model for C1

Estimates at each iteration

Iteration	SSE		Parameters		
0	2260.85	0.100	0.100	0.100	0.237
1	1974.71	0.051	0.150	0.250	0.099
2	1935.87	0.187	0.300	0.261	0.074
3	1889.65	0.319	0.450	0.276	0.050
4	1824.29	0.439	0.600	0.300	0.024
5	1662.56	0.500	0.750	0.382	-0.016
6	1491.63	0.350	0.711	0.509	-0.038
7	1339.92	0.244	0.705	0.659	-0.050
8	1252.66	0.163	0.714	0.809	-0.049
9	1248.27	0.156	0.742	0.806	-0.024
10	1248.10	0.159	0.749	0.810	-0.024
11	1248.09	0.161	0.751	0.810	-0.023
12	1248.08	0.162	0.752	0.810	-0.023
13	1248.08	0.162	0.752	0.810	-0.023

Unable to reduce sum of squares any further

Final Estimates of Parameters

Type	Coef	StDev	T
AR 1	0.1618	0.2410	0.67
MA 1	0.7523	0.1500	5.02
SMA 10	0.8100	0.1548	5.23
Constant	-0.02275	0.05734	-0.40

Differencing: 1 regular, 1 seasonal of order 10

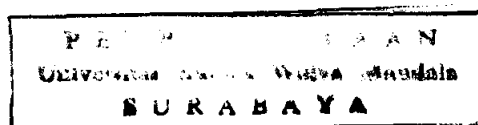
Number of observations: Original series 60, after differencing 49

Residuals: SS = 1004.94 (backforecasts excluded)

MS = 22.33 DF = 45

Modified Box-Pierce (Ljung-Box) Chi-Square statistic

Lag	12	24	36	48
Chi-Square	6.7(DF= 9)	14.7(DF=21)	22.7(DF=33)	50.7(DF=45)

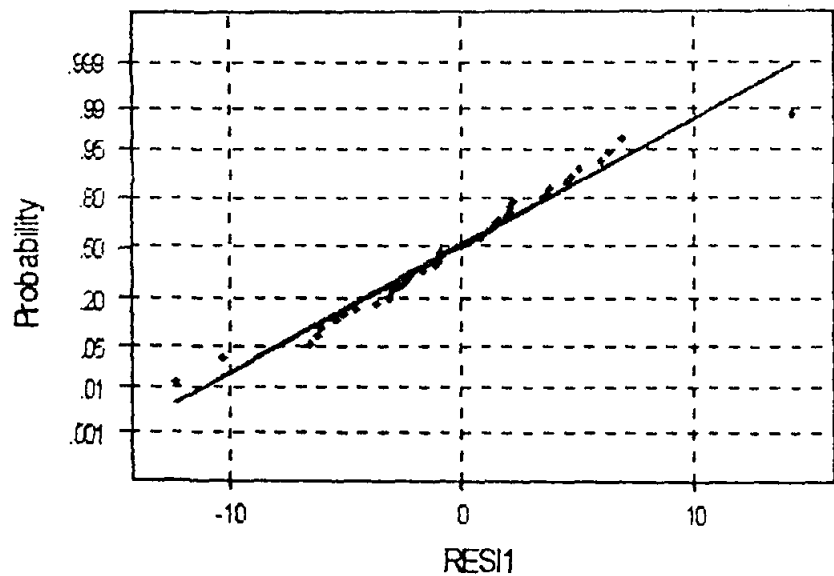


Forecasts from period 60

95 Percent Limits

Period	Forecast	Lower	Upper
61	1548.97	1539.71	1558.24
62	1551.82	1541.81	1561.83
63	1551.99	1541.57	1562.42
64	1558.48	1547.69	1569.26
65	1558.74	1547.61	1569.87
66	1558.07	1546.61	1569.53
67	1563.43	1551.65	1575.21
68	1569.90	1557.80	1582.00
69	1572.28	1559.87	1584.68
70	1548.58	1535.88	1561.28
71	1554.46	1540.98	1567.93
72	1558.40	1544.49	1572.31

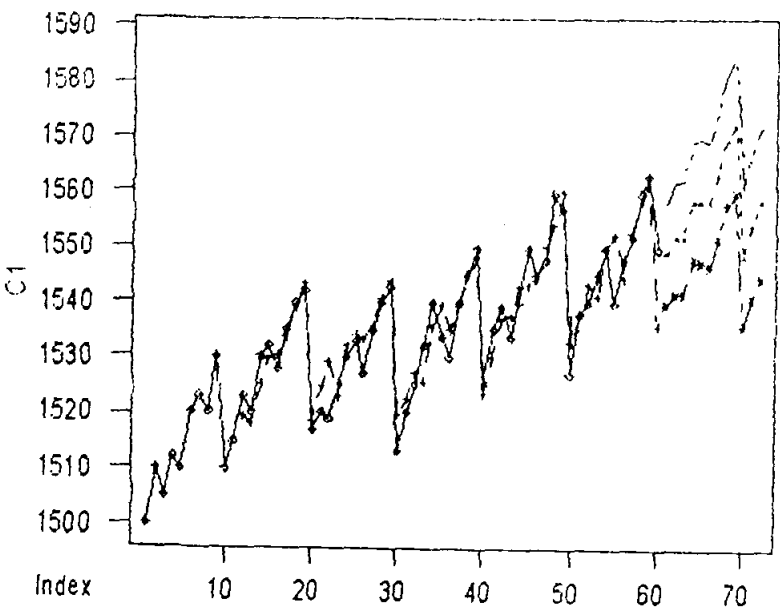
PRODUK E



Average: 0.256954
StDev: 4.58823
N: 49

Kolmogorov-Smirnov Normality Test
D+: 0.095 D-: 0.078 D: 0.086
Approximate P-Value: 0.15

PRODUK E



LAMPIRAN 3

Bahan Baku PA

$$Z_1 = Z_0^* + C_{01} = 215 + 3000(7159) = 21477215^*$$

$$Z_2 = \begin{cases} Z_0^* + C_{02} = 215 + 3000(7159 + 8168) + 23,67(8168) = 46174552 \\ Z_1^* + C_{12} = 21477215 + 215 + 3000(8168) = 45981430^* \end{cases}$$

$$Z_3 = \begin{cases} Z_0^* + C_{03} = 215 + 3000(7159 + 8168 + 8185) + 23,67(8168 + 8185) + 23,67(8185) = 71117030 \\ Z_1^* + C_{13} = 21477215 + 215 + 3000(8168 + 8185) + 23,67(8185) = 70730169 \\ Z_2^* + C_{23} = 45981430 + 215 + 3000(8185) = 70536645^* \end{cases}$$

$$Z_4 = \begin{cases} Z_0^* + C_{04} = 215 + 3000(7159 + 8168 + 8185 + 7942) + 23,67(8168 + 8185 + 7942) + 23,67(8185 + 7942) + 23,67(7942) = 95506991 \\ Z_1^* + C_{14} = 21477215 + 215 + 3000(8168 + 8185 + 7942) + 23,67(8185 + 7942) + 23,67(7942) = 94932143 \end{cases}$$

$$Z_4 = \begin{cases} Z_2^* + C_{24} = 45981430 + 215 + 3000(8185 + 7942) + 23,67(7942) = 94550632 \\ Z_3^* + C_{34} = 70536645 + 215 + 3000(7942) = 94362860^* \end{cases}$$

$$Z_5 = \begin{cases} Z_0^* + C_{05} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205) + 23,67(8168 + 8185 + 7942 + 8205) + 23,67(8185 + 7942 + 8205) + 23,67(7942 + 8205) + 23,67(8205) = 120898840 \\ Z_1^* + C_{15} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205) + 23,67(8185 + 7942 + 8205) + 23,67(7942 + 8205) + 23,67(8205) = 120129780 \end{cases}$$

$$Z_5 = \begin{cases} Z_2^* + C_{25} = 45981430 + 215 + 3000(8185 + 7942 + 8205) + 23,67(7942 + 8205) + 23,67(8205) = 119554057 \\ Z_3^* + C_{35} = 70536645 + 215 + 3000(7942 + 8205) + 23,67(8205) = 119172072 \end{cases}$$

$$Z_5 = \begin{cases} Z_4^* + C_{45} = 94362860 + 215 + 3000(8205) = 118978075^* \end{cases}$$

$$Z_0 * + C_{06} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191) + 23,67(8168 + 8185 + 7942 + 8205 + 8191) + 23,67(8185 + 7942 + 8205 + 8191) + 23,67(7942 + 8205 + 8191) + 23,67(8205 + 8191) + 23,67(8191) = 146441245$$

$$Z_1 * + C_{16} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191) + 23,67(8185 + 7942 + 8205 + 8191) + 23,67(7942 + 8205 + 8191) + 23,67(8205 + 8191) + 23,67(8191) = 145478304$$

$$Z_6 = \left\{ \begin{array}{l} Z_2 * + C_{26} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191) + 23,67(7942 + 8205 + 8191) + 23,67(8205 + 8191) + 23,67(8191) = 144708700 \end{array} \right.$$

$$Z_3 * + C_{26} = 70536645 + 215 + 3000(7942 + 8205 + 8191) + 23,67(8205 + 8191) + 23,67(8191) = 144132834$$

$$Z_3 * + C_{26} = 94362860 + 215 + 3000(8205 + 8191) + 23,67(8191) = 143744956$$

$$Z_5 * + C_{56} = 118978075 + 215 + 3000(8191) = 143551290 *$$

$$Z_0 * + C_{07} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 23,67(8185 + 7942 + 8205 + 8191 + 8238) + 23,67(7942 + 8205 + 8191 + 8238) + 23,67(8205 + 8191 + 8238) + 23,67(8191 + 8238) + 23,67(8238) = 172325206$$

$$Z_1 * + C_{17} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 23,67(8185 + 7942 + 8205 + 8191 + 8238) + 23,67(7942 + 8205 + 8191 + 8238) + 23,67(8205 + 8191 + 8238) + 23,67(8191 + 8238) + 23,67(8238) = 171167272$$

$$Z_7 = \left\{ \begin{array}{l} Z_2 * + C_{27} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238) + 23,67(7942 + 8205 + 8191 + 8238) + 23,67(8205 + 8191 + 8238) + 23,67(8191 + 8238) + 23,67(8238) = 170202674 \end{array} \right.$$

$$Z_3 * + C_{27} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238) + 23,67(8205 + 8191 + 8238) + 23,67(8191 + 8238) + 23,67(8238) = 169431815$$

$$Z_3 * + C_{27} = 94362860 + 215 + 3000(8205 + 8191 + 8238) + 23,67(8191 + 8238) + 23,67(8238) = 168848943$$

$$Z_5 * + C_{57} = 118978075 + 215 + 3000(8191 + 8238) + 23,67(8238) = 168460284$$

$$Z_6 * + C_{67} = 143551290 + 215 + 3000(8238) = 168265505 *$$

$$Z_0^* + C_{08} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8205 + 8191 + 8238 + 8249) + 23,67(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 198438983$$

$$Z_1^* + C_{18} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8205 + 8191 + 8238 + 8249) + 23,67(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 197085794$$

$$Z_2^* + C_{28} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 23,67(7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8205 + 8191 + 8238 + 8249) + 23,67(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 196706958$$

$$Z_3^* + C_{38} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238 + 8249) + 23,67(8205 + 8191 + 8238 + 8249) + 23,67(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 194959830$$

$$Z_4^* + C_{48} = 94362860 + 215 + 3000(8205 + 8191 + 8238 + 8249) + 23,67(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 194181704$$

$$Z_5^* + C_{58} = 118978075 + 215 + 3000(8191 + 8238 + 8249) + 23,67(8238 + 8249) + 23,67(8249) = 193597791$$

$$Z_6^* + C_{68} = 143551290 + 215 + 3000(8238 + 8249) + 23,67(8249) = 193207759$$

$$Z_7^* + C_{78} = 168265505 + 215 + 3000(8249) = 193012720 *$$

$$Z_0^* + C_{99} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) = 224827747$$

$$Z_1^* + C_{19} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) + 23,67(8274) = 223278714$$

$$Z_2^* + C_{29} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) +$$

$$Z_2 = 23,67(8274) = 221923016$$

$$Z_3^* + C_{39} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) + 23,67(8274) = 220761058$$

$$Z_4^* + C_{49} = 94362860 + 215 + 3000(8205 + 8191 + 8238 + 8249 + 8274) + 23,67(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) + 23,67(8274) = 219787087$$

$$Z_5^* + C_{59} = 118978075 + 215 + 3000(8191 + 8238 + 8249 + 8274) + 23,67(8238 + 8249 + 8274) + 23,67(8249 + 8274) + 23,67(8274) = 219007328$$

$$Z_6^* + C_{69} = 143551290 + 215 + 3000(8238 + 8249 + 8274) + 23,67(8249 + 8274) + 23,67(8274) = 218421450$$

$$Z_7^* + C_{79} = 168265505 + 215 + 3000(8249 + 8274) + 23,67(8274) = 218030566$$

$$Z_8^* + C_{89} = 193012720 + 215 + 3000(8274) = 217834935 *$$

$$Z_0 * + C_{010} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8189) = 251139332$$

$$Z_1 * + C_{110} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8189) = 249396383$$

$$Z_2 * + C_{210} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 248042106$$

$$Z_{10} = Z_3 * + C_{310} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 246491060$$

$$Z_3 * + C_{310} = 94362860 + 215 + 3000(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 245323255$$

$$Z_3 * + C'_{510} = 118978075 + 215 + 3000(8191 + 8238 + 8249 + 8274 + 8189) + 23,67(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 244349663$$

$$Z_6 * + C'_{610} = 143551290 + 215 + 3000(8238 + 8249 + 8274 + 8189) + 23,67(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 243569951$$

$$Z_7 * + C'_{710} = 168265505 + 215 + 3000(8249 + 8274 + 8189) + 23,67(8274 + 8189) + 23,67(8189) = 242985233$$

$$Z_8 * + C'_{810} = 193012720 + 215 + 3000(8274 + 8189) + 23,67(8189) = 242595769$$

$$Z_9 + C'_{910} = 217834935 + 215 + 3000(8189) = 242402150 *$$

$$Z_0^* + C_{011} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8159 + 8229) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 277774219$$

$$Z_1^* + C_{111} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 275836406$$

$$Z_2^* + C_{210} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 274287349$$

$$Z_{11} = Z_3^* + C_{211} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 272541523$$

$$Z_3^* + C_{211} = 94362860 + 215 + 3000(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 271178937$$

$$Z_5^* + C_{511} = 118978075 + 215 + 3000(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 270010565$$

$$Z_6^* + C_{611} = 143551290 + 215 + 3000(8238 + 8249 + 8274 + 8189 + 8229) + 23,67(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 269036073$$

$$Z_7^* + C_{711} = 168265505 + 215 + 3000(8249 + 8274 + 8189 + 8229) + 23,67(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 268256574$$

$$Z_8^* + C_{811} = 193012720 + 215 + 3000(8274 + 8189 + 8229) + 23,67(8189 + 8229) + 23,67(8229) = 267672329$$

$$Z_9^* + C_{911} = 217834935 + 215 + 3000(8189 + 8229) + 23,67(8229) = 267283930$$

$$Z_{10}^* + C_{1011} = 242402150 + 215 + 3000(8229) = 267089365 *$$

$$Z_0 * + C_{012} = 215 + 3000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 304551719$$

$$Z_1 * + C_{112} = 21477215 + 215 + 3000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 302419424$$

$$Z_2 * + C_{212} = 45981430 + 215 + 3000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 300675964$$

$$Z_3 * + C_{312} = 70536645 + 215 + 3000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 298735736$$

$$Z_4 * + C_{412} = 94362860 + 215 + 3000(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 297178749$$

$$Z_5 * + C_{512} = 118978075 + 215 + 3000(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 295815975$$

$$Z_6 * + C_{612} = 143551290 + 215 + 3000(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 294647081$$

$$Z_7 * + C_{712} = 168265505 + 215 + 3000(8249 + 8274 + 8189 + 8229 + 8213) + 23,67(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 293673181$$

$$Z_8 * + C_{812} = 193012720 + 215 + 3000(8274 + 8189 + 8229 + 8213) + 23,67(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 292894535$$

$$Z_9 * + C_{912} = 217834935 + 215 + 3000(8189 + 8229 + 8213) + 23,67(8229 + 8213) + 23,67(8213) = 292311734$$

$$Z_{10} * + C_{1012} = 242402150 + 215 + 3000(8229 + 8213) + 23,67(8213) = 291922849$$

$$Z_{11} * + C_{1112} = 267089365 + 215 + 3000(8213) = 291728560 *$$

Bahan Baku CA

$$Z_1 = Z_0^* + C_{01} = 215 + 5000(7159) = 35795215^*$$

$$Z_2 = \begin{cases} Z_0^* + C_{02} = 215 + 5000(7159 + 8168) + 39,43(8168) = 76957279 \\ Z_1^* + C_{12} = 35795215 + 215 + 5000(8168) = 76635215^* \end{cases}$$

$$Z_3 = \begin{cases} Z_0^* + C_{03} = 215 + 5000(7159 + 8168 + 8185) + 39,43(8168 + 8185) + 39,43(8185) = 118527748 \\ Z_1^* + C_{13} = 35795215 + 215 + 5000(8168 + 8185) + 39,43(8185) = 122391831,3 \\ Z_2^* + C_{23} = 76635215 + 215 + 5000(8185) = 117560430^* \end{cases}$$

$$Z_4 = \begin{cases} Z_0^* + C_{04} = 215 + 5000(7159 + 8168 + 8185 + 7942) + 39,43(8168 + 8185 + 7942) + 39,43(8185 + 7942) + 39,43(7942) = 159177208 \\ Z_1^* + C_{14} = 37294715 + 215 + 5000(8168 + 8185 + 7942) + 39,43(8185 + 7942) + 39,43(7942) = 158219256 \\ Z_2^* + C_{24} = 76635215 + 215 + 5000(8185 + 7942) + 39,43(8241,59) = 157583583 \\ Z_3^* + C_{34} = 117560430 + 215 + 5000(7942) = 157270645^* \end{cases}$$

$$Z_5 = \begin{cases} Z_0^* + C_{05} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205) + 39,43(8168 + 8185 + 7942 + 8205) + 39,43(8185 + 7942 + 8205) + 39,43(7942 + 8205) + 39,43(8205) = 201496300 \\ Z_1^* + C_{15} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205) + 39,43(8185 + 7942 + 8205) + 39,43(7942 + 8205) + 39,43(8205) = 200214825 \\ Z_2^* + C_{25} = 76635215 + 215 + 5000(8185 + 7942 + 8205) + 39,43(7942 + 8502) + 39,43(8205) = 199255629 \\ Z_3^* + C_{35} = 117560430 + 215 + 5000(7942 + 8205) + 39,43(8205) = 198619168 \\ Z_4^* + C_{45} = 157270645 + 215 + 5000(8205) = 198295860^* \end{cases}$$

$$Z_0^* + C_{06} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191) + 39,43(8168 + 8185 + 7942 + 8205 + 8191) + 39,43(8185 + 7942 + 8205 + 8191) + 39,43(7942 + 8205 + 8191) + 39,43(8205 + 8191) + 67(8191) = 244066156$$

$$Z_1^* + C_{16} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191) + 39,43(8185 + 7942 + 8205 + 8191) + 39,43(7942 + 8205 + 8191) + 39,43(8205 + 8191) + 39,43(8191) = 242461710$$

$$Z_6 = \{ Z_2^* + C_{26} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191) + 39,43(7942 + 8205 + 8191) + 39,43(8205 + 8191) + 39,43(8191) = 241179543$$

$$Z_3^* + C_{36} = 117560430 + 215 + 5000(7942 + 8205 + 8191) + 39,43(8205 + 8191) + 39,43(8191) = 240220110$$

$$Z_4^* + C_{46} = 157270645 + 215 + 5000(8205 + 8191) + 39,43(8191) = 239573831$$

$$Z_5^* + C_{56} = 198295860 + 215 + 5000(8191) = 239251075^*$$

$$Z_0^* + C_{07} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 39,43(8185 + 7942 + 8205 + 8191 + 8238) + 39,43(7942 + 8205 + 8191 + 8238) + 39,43(8205 + 8191 + 8238) + 39,43(8191 + 8238) + 39,43(8238) = 287205102$$

$$Z_1^* + C_{17} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238) + 39,43(8185 + 7942 + 8205 + 8191 + 8238) + 39,43(7942 + 8205 + 8191 + 8238) + 39,43(8205 + 8191 + 8238) + 39,43(8191 + 8238) + 39,43(8238) = 285275831$$

$$Z_7 = \{ Z_2^* + C_{27} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238) + 39,43(7942 + 8205 + 8191 + 8238) + 39,43(8205 + 8191 + 8238) + 39,43(8191 + 8238) + 39,43(8238) = 283668840$$

$$Z_3^* + C_{37} = 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238) + 39,43(8205 + 8191 + 8238) + 39,43(8191 + 8238) + 39,43(8238) = 282384583$$

$$Z_4^* + C_{47} = 157270645 + 215 + 5000(8205 + 8191 + 8238) + 39,43(8191 + 8238) + 39,43(8238) = 281413519$$

$$Z_5^* + C_{57} = 198295860 + 215 + 5000(8191 + 8238) + 39,43(8238) = 280770899$$

$$Z_6^* + C_{67} = 239251075 + 215 + 5000(8238) = 280441290^*$$

$$Z_0^* + C_{08} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8205 + 8191 + 8238 + 8249) + 39,43(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 330726908$$

$$Z_1^* + C_{18} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8205 + 8191 + 8238 + 8249) + 39,43(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 328472380$$

$$Z_2^* + C_{28} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238 + 8249) + 39,43(7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8205 + 8191 + 8238 + 8249) + 39,43(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 326540131$$

$$Z_3^* + C_{38} = 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238 + 8249) + 39,43(8205 + 8191 + 8238 + 8249) + 39,43(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 324905869$$

$$Z_4^* + C_{48} = 157270645 + 215 + 5000(8205 + 8191 + 8238 + 8249) + 39,43(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 323134294$$

$$Z_5^* + C_{58} = 198295860 + 215 + 5000(8191 + 8238 + 8249) + 39,43(8238 + 8249) + 39,43(8249) = 322666416$$

$$Z_6^* + C_{68} = 239251075 + 215 + 5000(8238 + 8249) + 39,43(8249) = 322011548$$

$$Z_7^* + C_{78} = 280441290 + 215 + 5000(8249) = 321686505 *$$

$$Z_0^* + C_{09} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 374706859$$

$$Z_1^* + C_{19} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 372126087$$

$$Z_2^* + C_{29} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 369867593$$

$$Z_3^* + C_{39} = 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 367857444$$

$$Z_4^* + C_{49} = 157270645 + 215 + 5000(8205 + 8191 + 8238 + 8249 + 8274) + 39,43(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 365809269$$

$$Z_5^* + C_{59} = 198295860 + 215 + 5000(8191 + 8238 + 8249 + 8274) + 39,43(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 365015147$$

$$Z_6^* + C_{69} = 239251075 + 215 + 5000(8238 + 8249 + 8274) + 39,43(8249 + 8274) + 39,43(8274) = 364034036$$

$$Z_7^* + C_{79} = 280441290 + 215 + 5000(8249 + 8274) + 39,43(8274) = 363382749$$

$$Z_8^* + C_{89} = 321686505 + 215 + 5000(8274) = 363056720^*$$

$$Z_0^* + C_{010} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 418557889$$

$$Z_1^* + C_{110} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 415654225$$

$$Z_2^* + C_{210} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 412782237$$

$$Z_{10} = Z_3^* + C_{310} = 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 410666096$$

$$Z_4^* + C_{410} = 157270645 + 215 + 5000(8205 + 8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 408368730$$

$$Z_5^* + C_{510} = 198295860 + 215 + 5000(8191 + 8238 + 8249 + 8274 + 8189) + 39,43(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 407251716$$

$$Z_6^* + C_{610} = 239251075 + 215 + 5000(8238 + 8249 + 8274 + 8189) + 39,43(8249 + 8274 + 8189 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 405947713$$

$$Z_7^* + C_{710} = 280441290 + 215 + 5000(8249 + 8274 + 8189) + 39,43(8274 + 8189) + 39,43(8189) = 404973533$$

$$Z_8^* + C_{810} = 321686505 + 215 + 5000(8274 + 8189) + 39,43(8189) = 404324612$$

$$Z_9 + C_{910} = 363056720 + 215 + 5000(8189) = 404001935^*$$

$$Z_0 * + C_{011} = 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 462947584$$

$$Z_1 * + C_{111} = 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 459719450$$

$$Z_2 * + C_{211} = 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 456522992$$

$$Z_{11} = Z_3 * + C_{311} = 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 454008322$$

$$Z_4 * + C_{411} = 157270645 + 215 + 5000(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 451460547$$

$$Z_5 * + C_{511} = 198295860 + 215 + 5000(8191 + 8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 450019063$$

$$Z_6 * + C_{611} = 239251075 + 215 + 5000(8238 + 8249 + 8274 + 8189 + 8229) + 39,43(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 448390590$$

$$Z_7 * + C_{711} = 280441290 + 215 + 5000(8249 + 8274 + 8189 + 8229) + 39,43(8274 + 8189 + 8229 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 447091942$$

$$Z_8 * + C_{811} = 321686505 + 215 + 5000(8274 + 8189 + 8229) + 39,43(8189 + 8229) + 39,43(8229) = 446118551$$

$$Z_9 * + C_{911} = 363056720 + 215 + 5000(8189 + 8229) + 39,43(8229) = 445471404$$

$$Z_{10} * + C_{1011} = 404001935 + 215 + 5000(8229) = 445147150 *$$

$$\begin{aligned}
Z_0 * + C_{012} &= 215 + 5000(7159 + 8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + \\
&8274 + 8189 + 8229 + 8213) + 39,43(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + \\
&8274 + 8189 + 8229 + 8213) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + \\
&8189 + 8229 + 8213) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8191 + \\
&8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + 8189 + 8229 + 8213) + \\
&39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) = 507574809 \\
Z_1 * + C_{112} &= 37294715 + 215 + 5000(8168 + 8185 + 7942 + 8205 + 8191 + 8238 + 8249 + \\
&8274 + 8189 + 8229 + 8213) + 39,43(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + \\
&8189 + 8229 + 8213) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8191 + \\
&8238 + 8249 + 827 + 8189 + 8229 + 8213) + 39,43(8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + 8189 + 8229 + 8213) + 39,43 \\
&(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) = 504022836 \\
Z_2 * + C_{212} &= 76635215 + 215 + 5000(8185 + 7942 + 8205 + 8191 + 8238 + 8249 + 8274 + \\
&8189 + 8229 + 8213) + 39,43(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8191 + \\
&8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + 8189 + 8229 + 8213) + \\
&39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) = 500502539 \\
Z_3 * + C_{312} &= 117560430 + 215 + 5000(7942 + 8205 + 8191 + 8238 + 8249 + 8274 + 8189 + \\
&8229 + 8213) + 39,43(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43 \\
&(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8238 + 8249 + 8274 + 8189 + \\
&8229 + 8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + 8189 + 8229 + \\
&8213) + 39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) = 497590113 \\
Z_4 * + C_{412} &= 157270645 + 215 + 5000(8205 + 8191 + 8238 + 8249 + 8274 + 8189 + 8229 + \\
&8213) + 39,43(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8238 + 8249 + \\
&8274 + 8189 + 8229 + 8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + \\
&8189 + 8229 + 8213) + 39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) \\
&= 494792417 \\
Z_5 * + C_{512} &= 198295860 + 215 + 5000(8191 + 8238 + 8249 + 8274 + 8189 + 8229 + 8213) + \\
&39,43(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8249 + 8274 + 8189 + 8229 + 8213) \\
&+ 39,43(8274 + 8189 + 8229 + 8213) + 39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) + \\
&39,43(8213) = 493027095 \\
Z_6 * + C_{612} &= 239251075 + 215 + 5000(8238 + 8249 + 8274 + 8189 + 8229 + 8213) + 39,43 \\
&(8249 + 8274 + 8189 + 8189 + 8229 + 8213) + 39,43(8274 + 8189 + 8229 + 8213) + 39,43 \\
&(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) = 491074783 \\
Z_7 * + C_{712} &= 280441290 + 215 + 5000(8249 + 8274 + 8189 + 8229 + 8213) + 39,43(8274 + \\
&8189 + 8229 + 8229 + 8213) + 39,43(8189 + 8229 + 8213) + 39,43(8229 + 8213) = 489452296 \\
Z_8 * + C_{812} &= 321686505 + 215 + 5000(8274 + 8189 + 8229 + 8213) + 39,43(8189 + 8229 + 8213) \\
&+ 39,43(8229 + 8213) + 39,43(8213) = 488155067 \\
Z_9 * + C_{912} &= 363056720 + 215 + 5000(8189 + 8229 + 8213) + 39,43(8229 + 8213) + 39,43(8213) + \\
&39,43(8213) = 487184082 \\
Z_{10} * + C_{1012} &= 404001935 + 215 + 5000(8229 + 8213) + 39,43(8213) = 486535989 \\
Z_{11} * + C_{1112} &= 445147150 + 215 + 5000(8213) = 486212365 *
\end{aligned}$$

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$$Z_1 = Z_0 * + C_{01} = 215 + 2500(3575) = 89375 *$$

$$Z_2 = \begin{cases} Z_0 * + C_{02} = 215 + 2500(3575 + 4079) + 19,7(4079) = 19215571 \\ Z_1 * + C_{12} = 89375 + 215 + 2500(4079) = 19135430 * \end{cases}$$

$$Z_3 = \begin{cases} Z_0 * + C_{03} = 215 + 2500(3575 + 4079 + 4087) + 19,7(4079 + 4087) + \\ 19,7(4087) = 29594099 \\ Z_1 * + C_{13} = 89375 + 215 + 2500(4079 + 4087) + 19,7(4087) = 29433444 \\ Z_2 * + C_{23} = 19135430 + 215 + 2500(4087) = 29353145 * \end{cases}$$

$$Z_4 = \begin{cases} Z_0 * + C_{04} = 215 + 2500(3575 + 4079 + 4087 + 3966) + 19,7(4079 + 4087 + \\ 3966) + 19,7(4087 + 3966) + 19,7(3966) = 39743490 \\ Z_1 * + C_{14} = 89375 + 215 + 2500(4079 + 4087 + 3966) + 19,7(4087 + 3966) + \\ 19,7(3966) = 39504704 \\ Z_2 * + C_{24} = 19135430 + 215 + 2500(4087 + 3966) + 19,7(3966) = 39346275 \\ Z_3 * + C_{34} = 29353145 + 215 + 2500(3966) = 39268360 * \end{cases}$$

$$Z_5 = \begin{cases} Z_0 * + C_{05} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097) + 19,7(4079 + \\ 4087 + 3966 + 4097) + 19,7(4087 + 3966 + 4097) + 19,7(3966 + 4097) + 19,7 \\ (4097) = 50308833 \end{cases}$$

$$Z_5 = \begin{cases} Z_1 * + C_{15} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097) + 19,7(4087 + \\ 3966 + 4097) + 19,7(3966 + 4097) + 19,7(4097) = 49989337 \\ Z_2 * + C_{25} = 19135430 + 215 + 2500(4087 + 3966 + 4097) + 19,7(3966 + 4097) + \\ 19,7(4097) = 49750197 \\ Z_3 * + C_{35} = 29353145 + 215 + 2500(3966 + 4097) + 19,7(4097) = 49591571 \\ Z_4 * + C_{45} = 39268360 + 215 + 2500(4097) = 49511075 * \end{cases}$$

$$Z_0^* + C_{06} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090) + 19,7(4079 + 4087 + 3966 + 4097 + 4090) + 19,7(4087 + 3966 + 4097 + 4090) + 19,7(3966 + 4097 + 4090) + 19,7(4097 + 4090) + 19,7(4090) = 60936698$$

$$Z_1^* + C_{16} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090) + 19,7(4087 + 3966 + 4097 + 4090) + 19,7(3966 + 4097 + 4090) + 19,7(4097 + 4090) + 19,7(4090) = 60536629$$

$$Z_6 = \begin{cases} Z_2^* + C_{26} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090) + 19,7(3966 + 4097 + 4090) + 19,7(4097 + 4090) + 19,7(4090) = 60216916 \end{cases}$$

$$Z_3^* + C_{26} = 29353145 + 215 + 2500(3966 + 4097 + 4090) + 19,7(4097 + 4090) + 19,7(4090) = 59977717$$

$$Z_3^* + C_{26} = 39268360 + 215 + 2500(4097 + 4090) + 19,7(4090) = 59816648$$

$$Z_5^* + C_{36} = 49511075 + 215 + 5000(4090) = 59736290^*$$

$$Z_0^* + C_{07} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114) + 19,7(4087 + 3966 + 4097 + 4090 + 4114) + 19,7(3966 + 4097 + 4090 + 4114) + 19,7(4097 + 4090 + 4114) + 19,7(4090 + 4114) + 19,7(4114) = 71707973$$

$$Z_1^* + C_{17} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090 + 4114) + 19,7(4087 + 3966 + 4097 + 4090 + 4114) + 19,7(3966 + 4097 + 4090 + 4114) + 19,7(4097 + 4090 + 4114) + 19,7(4090 + 4114) + 19,7(4114) = 71226858$$

$$Z_3 = \begin{cases} Z_2^* + C_{27} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114) + 19,7(3966 + 4097 + 4090 + 4114) + 19,7(4097 + 4090 + 4114) + 19,7(4090 + 4114) + 19,7(4114) = 70826099 \end{cases}$$

$$Z_3^* + C_{27} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114) + 19,7(4097 + 4090 + 4114) + 19,7(4090 + 4114) + 19,7(4114) = 70505854$$

$$Z_3^* + C_{27} = 39268360 + 215 + 2500(4097 + 4090 + 4114) + 19,7(4090 + 4114) + 19,7(4114) = 70263740$$

$$Z_5^* + C_{37} = 49511075 + 215 + 5000(4090 + 4114) + 19,7(4114) = 70102336$$

$$Z_6^* + C_{67} = 59736290 + 215 + 5000(4114) = 70021505^*$$

$$Z_0^* + C_{08} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119) + 19,7(3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4097 + 4090 + 4114 + 4119) + 19,7(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 82573483$$

$$Z_1^* + C_{18} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090 + 4114 + 4119) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119) + 19,7(3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4097 + 4090 + 4114 + 4119) + 19,7(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 82011224$$

$$Z_2^* + C_{28} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114 + 4119) + 19,7(3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4097 + 4090 + 4114 + 4119) + 19,7(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 81529321$$

$$Z_3^* + C_{28} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4097 + 4090 + 4114 + 4119) + 19,7(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 81127932$$

$$Z_3^* + C_{28} = 39268360 + 215 + 2500(4097 + 4090 + 4114 + 4119) + 19,7(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 80804673$$

$$Z_5^* + C_{58} = 49511075 + 215 + 5000(4090 + 4114 + 4119) + 19,7(4114 + 4119) + 19,7(4119) = 80562124$$

$$Z_6^* + C_{68} = 59736290 + 215 + 5000(4114 + 4119) + 19,7(4119) = 80400149$$

$$Z_7^* + C_{78} = 70021505 + 215 + 5000(4119) = 80319220^*$$

$$Z_0^* + C_{99} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(3966 + 4097 + 4090 + 4114 + 4119) + 19,7(4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 93554686$$

$$Z_1^* + C_{19} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090 + 4114 + 4119 + 4132) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 92911027$$

$$Z_2^* + C_{29} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 92347723$$

$$Z_2^* + C_{28} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 91864934$$

$$Z_3^* + C_{29} = 39268360 + 215 + 2500(4097 + 4090 + 4114 + 4119 + 4132) + 19,7(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 91460274$$

$$Z_5^* + C_{39} = 49511075 + 215 + 5000(4090 + 4114 + 4119 + 4132) + 19,7(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 91136326$$

$$Z_6^* + C_{89} = 59736290 + 215 + 5000(4114 + 4119 + 4132) + 19,7(4119 + 4132) + 19,7(4132) = 90892950$$

$$Z_7^* + C_{79} = 70021505 + 215 + 5000(4119 + 4132) + 19,7(4132) = 90730620$$

$$Z_8^* + C_{89} = 80319220 + 215 + 5000(4132) = 90649435 *$$

$$Z_0^* + C_{010} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4089) + 19,7(4097 + 40906 + 4114 + 4119 + 4132 + 4089) + 19,7(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 104502166$$

$$Z_1^* + C_{110} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 103777953$$

$$Z_2^* + C_{210} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 103134096$$

$$Z_{10} = Z_2^* + C_{210} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 102570753$$

$$Z_3^* + C_{310} = 39268360 + 215 + 2500(4097 + 4090 + 4114 + 4119 + 4132 + 1089) + 19,7(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 102085541$$

$$Z_5^* + C_{510} = 49511075 + 215 + 5000(4090 + 4114 + 4119 + 4132 + 4089) + 19,7(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 101681039$$

$$Z_6^* + C_{610} = 59736290 + 215 + 5000(4114 + 4119 + 4132 + 4089) + 19,7(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 101357110$$

$$Z_7^* + C_{710} = 70021505 + 215 + 5000(4119 + 4132 + 4089) + 19,7(4132 + 4089) + 19,7(4089) = 101114227$$

$$Z_8^* + C_{810} = 80319220 + 215 + 5000(4132 + 4089) + 19,7(4089) = 100952488$$

$$Z_9 + C_{910} = 90649435 + 215 + 5000(4089) = 100872150^*$$

$$Z_0 * + C_{011} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4089 + 4110) + 19,7(4097 + 40906 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) = 115586836$$

$$Z_1 * + C_{111} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 114781656$$

$$Z_2 * + C_{211} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 114056832$$

$$Z_{11} = Z_2 * + C_{211} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 113412522$$

$$Z_3 * + C_{311} = 39268360 + 215 + 2500(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 112846343$$

$$Z_5 * + C_{511} = 49511075 + 215 + 5000(4090 + 4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 112360874$$

$$Z_6 * + C_{611} = 59736290 + 215 + 5000(4114 + 4119 + 4132 + 4089 + 4110) + 19,7(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 111955978$$

$$Z_7 * + C_{711} = 70021505 + 215 + 5000(4119 + 4132 + 4089 + 4110) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 111632128$$

$$Z_8 * + C_{811} = 80319220 + 215 + 5000(4132 + 4089 + 4110) + 19,7(4089 + 4110) + 19,7(4110) = 111389422$$

$$Z_9 * + C_{911} = 90649435 + 215 + 5000(4089 + 4110) + 19,7(4110) = 111228117$$

$$Z_{10} * + C_{1011} = 100872150 + 215 + 5000(4110) = 111473365 *$$

$$Z_0 * + C_{012} = 215 + 2500(3575 + 4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4079 + 4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4101) = 126728023$$

$$Z_1 * + C_{112} = 89375 + 215 + 2500(4079 + 4087 + 3966 + 1097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 125842053$$

$$Z_2 * + C_{212} = 19135430 + 215 + 2500(4087 + 3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 125036440$$

$$Z_{12} = Z_2 * + C_{212} = 29353145 + 215 + 2500(3966 + 4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4097 + 4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 124311340$$

$$Z_3 * + C_{312} = 39268360 + 215 + 2500(4097 + 4090 + 4114 + 4119 + 4132 + 1089 + 4110 + 4101) + 19,7(4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 123664371$$

$$Z_5 * + C_{512} = 49511075 + 215 + 5000(4090 + 4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 123098112$$

$$Z_6 * + C_{612} = 59736290 + 215 + 5000(4114 + 4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 122612427$$

$$Z_7 * + C_{712} = 70021505 + 215 + 5000(4119 + 4132 + 4089 + 4110 + 4101) + 19,7(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 122207787$$

$$Z_8 * + C_{812} = 80319220 + 215 + 5000(4132 + 4089 + 4110 + 4101) + 19,7(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 121884291$$

$$Z_9 * + C_{912} = 90649435 + 215 + 5000(4089 + 4110 + 4101) + 19,7(4110 + 4101) + 19,7(4101) = 121642196$$

$$Z_{10} * + C_{1012} = 100872150 + 215 + 5000(4110 + 4101) + 19,7(4101) = 121480655$$

$$Z_{11} * + C_{1112} = 111147365 + 215 + 5000(4101) = 121400080 *$$